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GUARDIAN OF THE TRAIL

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Archeological & Historical Investigations at Fort Craig

PEGGY A. GEROW

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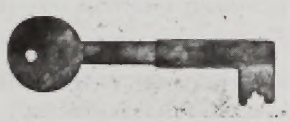
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with contributions by
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SERIES EDITOR'S FOREWORD

Guardian of the Trail: Archeological and Historical Investigation at Ft. Craig documents the results of excavations carried out from 1990 to 1994 by the Archaeological and Historical Research Institute (AHRI). This publication is our fourth report under the New Mexico Bureau of Land Management's *Cultural Resources Series Published Monographs* that shares important field school findings with the public. This fascinating story of the lives of American soldiers in the frontier territory of New Mexico can only be told because of the dedication of scores of volunteers who helped surface collect, map, dig, and analyze the artifacts at this property. We are especially indebted to Peggy Gerow, who provided outstanding leadership during the field school and who worked tirelessly to assemble this volume. Charles H. Carroll served as the Socorro Resource Area archeologist during the field school. He administered an Assistance Agreement with AHRI, providing financial and logistical support. Although he has since become the manager of the Sloan National Conservation Area in Nevada, Charles Carroll planned and designed the existing interpretive facilities and infrastructure at Ft. Craig. His presence and leadership in management of the site will be felt for years to come.

A system of more than 60 military installations was established in nineteenth-century New Mexico. These forts, supply depots, and minor outposts all served to integrate the new territory into the expanding United States. The public is fascinated by the rich and turbulent history these forts experienced. A wide variety of events are being planned to commemorate the 150th anniversary of the founding of Ft. Craig. In the fall of 2004, activities such as Mountain Spirit dances, academic conferences, living history, Chautauqua skits, battle reenactments, concerts, and even nineteenth-century fashion shows will be held in and around Socorro, New Mexico.

In response to Congressional mandates, the New Mexico BLM and a coalition of agencies published *Boots and Saddles: An Interagency Report on Seven Historic Military Forts in New Mexico* in 1993. This report details each fort's preservation and interpretation needs. Currently there is renewed interest in promoting cooperative forts management. A new inter-agency forts coordinated management group has formed, and efforts are underway to develop joint interpretive programs, to incorporate Native American perspectives, and to share resources and personnel to improve site restoration efforts.

The New Mexico Bureau of Land Management hopes that public interest and support for Ft. Craig generated by this publication and the commemorative events tied to the 150th anniversary of its founding will translate into increased heritage tourism. Supporting the interpretation of New Mexico frontier military history will be El Camino Real International Heritage Center, a joint interpretive center managed by New Mexico State Monuments and the New Mexico BLM. This beautiful new facility, located between Socorro and Truth or Consequences, will explain the role of the Camino Real de Tierra Adentro in the development of New Mexico. Since many of the forts, including Ft. Craig, were built to protect travelers and goods along the trail, the exhibits will explain the relationship between military forts and long-distance trail routes.

This publication sheds light on cultural and military conflicts of the nineteenth century, and economic conditions of frontier life. The information and analyses explain the differing economic status of various fort personnel, the degree of reliance on the local economy, and the effectiveness of Army supply shipments to the fort. Through careful analyses of archeological field school results, *Guardian of the Trail: Archeological and Historical Investigation at Ft. Craig* places developments at Ft. Craig in their broader historical context. This report effectively blends archeological techniques and historical documentary research. We hope you will enjoy the fascinating story of boots and saddles, of boredom and war, in frontier New Mexico. ✠

—Stephen L. Fosberg, Series Editor—April 2004

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ACKNOWLEDGMENTS

In the fall of 1988 Martha Binford, Ron Stauber, and I conducted a cultural resources inventory of the Fort Craig Special Management Area. It was the first time the three of us had ever seen the fort, and from the first day we were captivated by its silent omnipresence. Nights by the campfire were spent fantasizing about excavating within the ruins. Little did we realize that in two years those dreams would become reality. The five seasons at Fort Craig can be best summed up by the following—hot days, nightly torrents of rain, gale force winds, too many rattlesnakes, excellent archeology, exciting treasures, answers to questions, questions that need answers, new friends, old friends—in other words, FUN!

The success of a project of this magnitude could not have happened without the efforts and cooperation of numerous individuals. The project development and administration was accomplished through the efforts of the Bureau of Land Management's Socorro Field Office. Charles Carroll, Socorro Field Office, coordinated the field logistics and volunteered his time to take part in the excavations. Pam Smith, Las Cruces District, volunteered her time each session, provided me with copies of excavation reports from Fort Cummings, and provided support throughout the project. Dick Chapman and Patrick Hogan of the University of New Mexico's Office of Contract Archeology (OCA) were highly supportive of the project and were extremely flexible about my work schedule. OCA was also most generous in loaning us additional equipment for the excavations. Thanks also must go to Eligio Aragon (Alley), who volunteered his backhoe services at the end of each field season.

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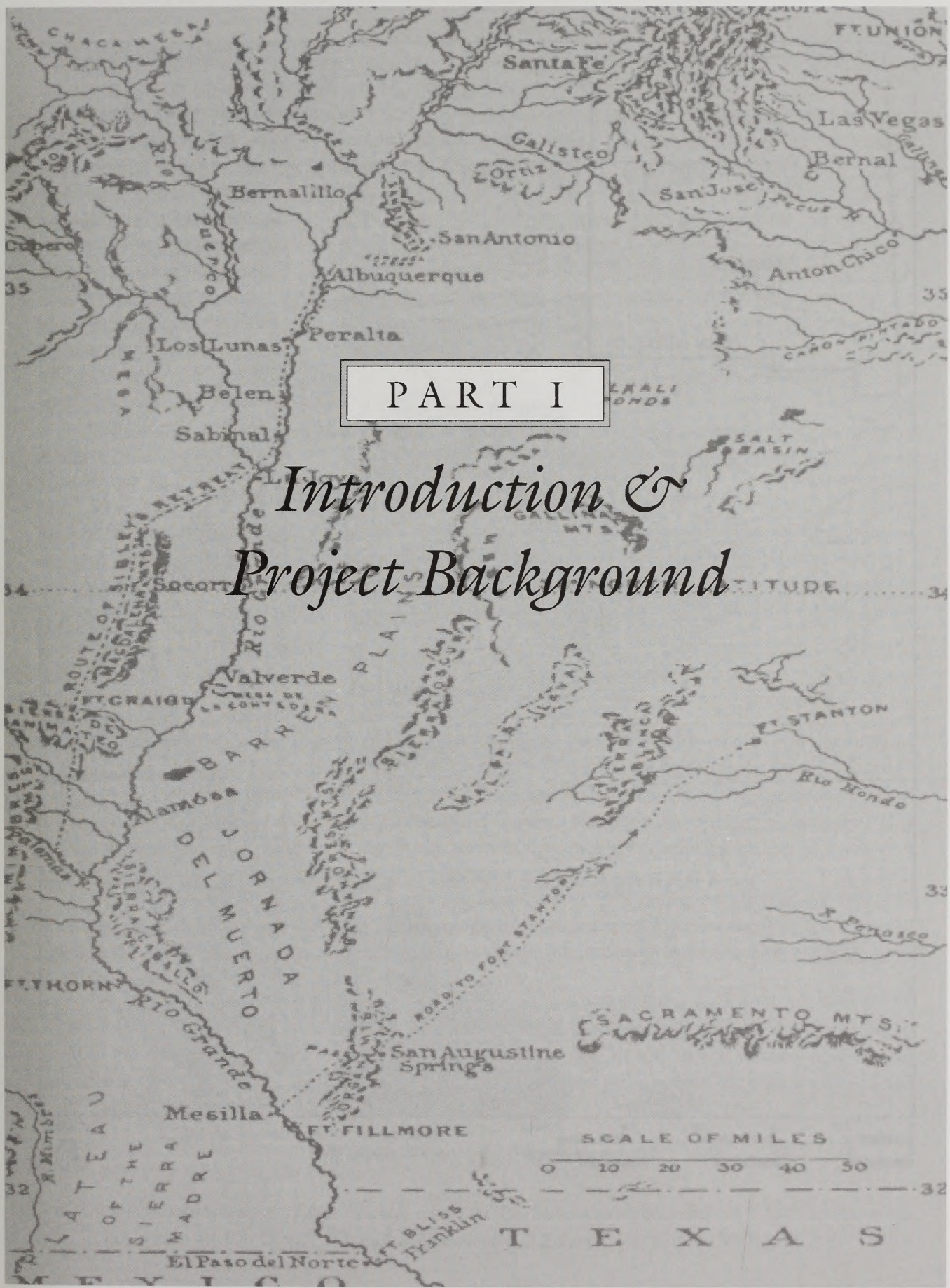
The analysis of the artifacts was completed by numerous individuals, often on a volunteer basis. Charles Haecker and Harding Polk II analyzed most of the ceramic and metal artifacts. Rick Morris and Jayne Stewart added their expertise to the horseshoe analysis. Analysis of the ammunition was done by Jeanne A. Schutt, with Scott Berger and Keith Kofford aiding in the identification of some of the bullets. Martha Binford, Ken Brown, and Marie Brown identified the faunal remains and synthesized the data. Wood speciation was done by Rick Holloway. Glenna Dean analyzed the cloth fragments and the corn cob, while both Glenna and Rick did the macrobotanical analysis.

Colleen Johnson, David Ramirez, and Donna Ward conducted the data entry, and Pete Eschman coordinated the computer analysis. Donna Lasusky helped with the typing of several chapters. Ron Stauber created the site maps from the five seasons and compiled most of the graphics. Sara Eidenbach and Spring Warren illustrated several of the artifacts; Linda Gilkey, Harding Polk II, and Sam Tubiolo took most of the artifact photos. June-el Piper served as technical editor and deserves much credit for the smooth-flowing text. Donna Carpio was instrumental in making this such a wonderful book. Her talent and creativity in the design and layout are extraordinary. I am deeply grateful for all of their hard work.

Finally, a special note of thanks goes to Marion Grinstead, whose on-site presence added a greater dimension to the excavations. Her enthusiasm about the work and her love of the work made us push a little harder to complete the tasks at hand. Marion not only conducted the archival research on the various buildings that were excavated, but also wrote the chapters. She provided much needed information, discussion, and support throughout the project, and is an invaluable friend.

To all of these people, I offer my heartfelt thanks and gratitude. Their interests and contributions greatly aided in the success of the Fort Craig archeological project. ✠

—Peggy A. Gerow



PART I

Introduction & Project Background

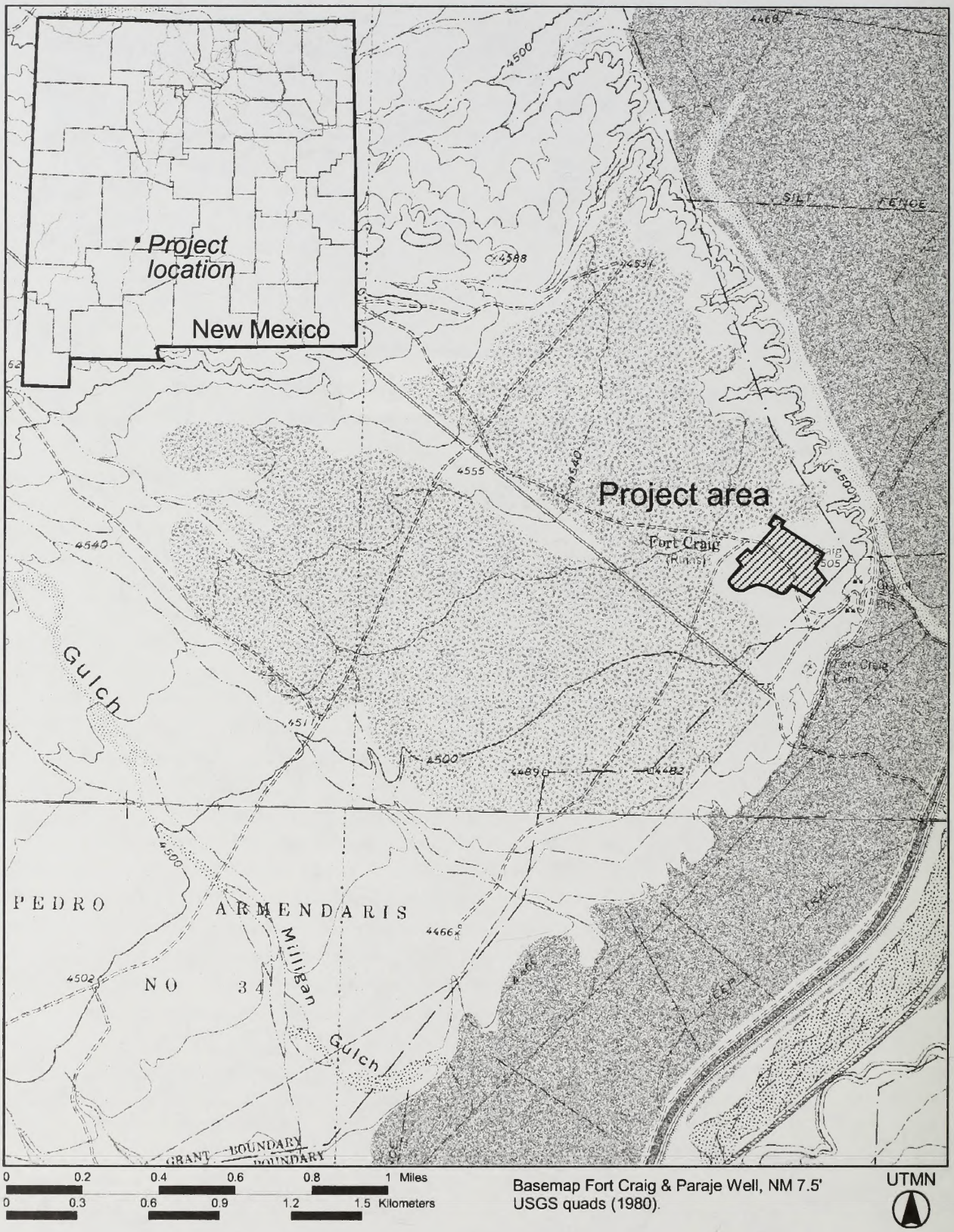


Figure 1.1. *Location of Fort Craig.*

Chapter 1

INTRODUCTION



THIS REPORT DESCRIBES the results of the archeological excavations and historical records search conducted by the Archaeological and Historical Research Institute (AHRI) at the Fort Craig National Historic site. Fort Craig is located approximately 25 miles south of Socorro, New Mexico, in the south-central portion of the state, within Section 11, Township 21S, Range 8W of the Fort Craig Quadrangle (USGS 7.5-minute series) (Figure 1.1).

PROJECT BACKGROUND

In the fall of 1989, the Archaeological and Historical Research Institute (AHRI) entered into negotiations with the Bureau of Land Management to establish a five-year field school at Fort Craig beginning in June of 1990. This project was designed to serve a number of purposes: *(a)* to operate an archeological field school for the training of students and the interested public; *(b)* to assess the nature and extent of cultural resources at the site and to serve as a guide for any future research that may be undertaken; and *(c)* to establish a foundation for the BLM's public interpretation program at the site.

The five seasons of fieldwork were conducted from 1990 to 1994 during the summer and fall, with more than 100 volunteers participating in the archeological investigations over the course of the five sessions. These participants were trained by AHRI personnel in such techniques as surface collecting, mapping, hand excavations, and in-field artifact cataloging.

The work effort for the five seasons concentrated on areas around the front gate that were to be impacted by the new walking trail (1990), several rooms within the western enlisted men's quarters (1991), an ell in the eastern officers' quarters (1992), the new hospital (1993), and several rooms within the old hospital row (1994) (Figure 1.2). Co-sponsored by the Bureau of Land Management, the work was conducted under Cultural Resource Use Permit No. 92-8152-90-1.

ENVIRONMENTAL SETTING

Fort Craig is situated on an old terrace 72 feet above the Rio Grande at an elevation of 4,314 feet above sea level. It lies within the Rio Grande rift, in the lowland area at the confluence of the Milligan trough and the

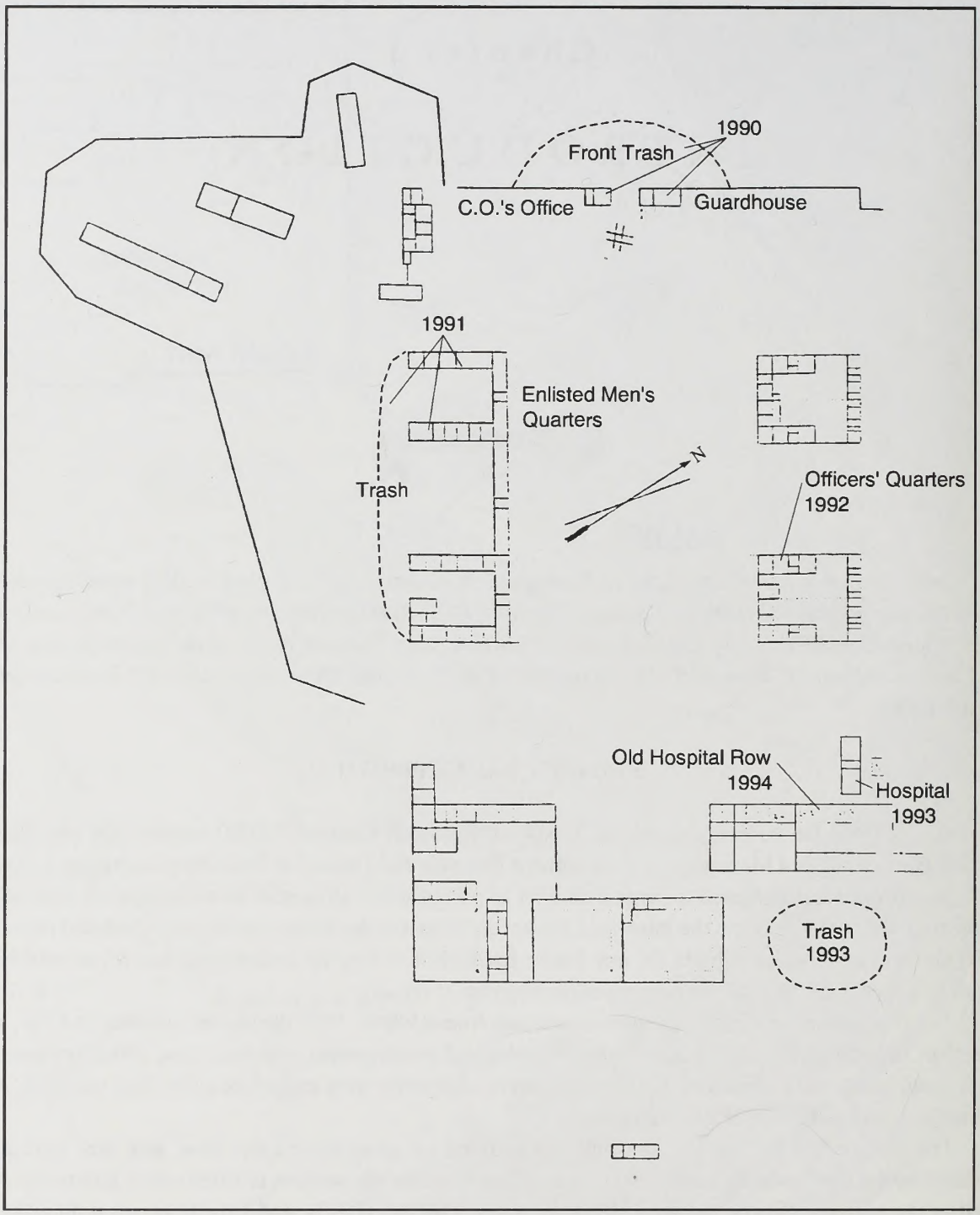


Figure 1.2. Location of data recovery areas.

San Marcial basin (Krason et al. 1983). The site has a commanding view of the Black Range of the San Mateo Mountains to the west, the Fra Cristobal Range to the south, and the San Andres Range far to the east. The fort is located at the northernmost edge of the Jornada del Muerto, the vast arid area that stretches for 80+ miles down the east side of the Fra Cristobal Range.

Fort Craig lies on a gently sloping alluvial fan with deep, well-drained soils. More than 80% of the area is Turney loam soils, which typically have a pale brown loam surface approximately four inches thick. The upper part of the subsoil consists of reddish to brown loam and sandy-clay loam underlain by a brown clay loam. The substratum, which averages 60 inches in depth, is a pink and pinkish white loam. Coarser soils and soils with larger amounts of cobbles and gravel are present on steep breaks (U.S. Soil Conservation Service 1982).

These soils support a typical southern desertic basin vegetation. Fencing of the SMA has led to a dominance of grasses followed by creosote and mesquite bushes. The bosque riparian area within the floodplain below the fort is dominated by saltcedar (*Tamarix pentandra*) with lesser amounts of cottonwood and willow.

The area is classified as semiarid and receives an average of 9.6 inches of precipitation annually. Because of favorable wind conditions, summer is generally the rainy season, with much of the precipitation falling in the form of brief, but heavy, thundershowers. Local rainfall patterns are variable. The temperatures fluctuate widely, with daily temperature ranges commonly exceeding 30° F. The yearly average maximum and minimum temperatures are 74° F and 41° F. The average number of frost-free days is 197 (Berman 1979). This climatic description is very similar to one written in 1875 in U.S. Report on Hygiene, Circular No. 8:

> the climate is variable; in summer the heat is very great; in winter there is a slight frost, and some little snow. This season is disturbed by the great storms of dust which blow, from the west principally, over this post as well as over all the lower posts in New Mexico, thereby marring what would otherwise be a delightful climate at that time of the year. The dust at times is stifling. The prevailing winds in summer are southwest; during winter from the north (Billings 1875:250).

VOLUME OUTLINE

This volume is divided into six main parts (I through VI) composed of 28 chapters and four appendices. Part I contains this chapter; Chapter 2, which presents a brief historical overview of Fort Craig and previous archeological and historical work conducted in and around the fort; and Chapter 3, which discusses the research questions and excavation strategies. Part II presents the data recovery descriptions for the five field school sessions. Each session is discussed in its own chapter. Part III consists of six chapters presenting the results of historical documentary research about the various buildings investigated during the field schools and a discussion about Army doctors, frontier medicine, and general health problems at Fort Craig. Part IV contains all the various artifact analyses, which are discussed either by material type or artifact class. The final section, Part V, addresses the research issues in light of the archeological and historical investigations, makes comparisons with Forts Fillmore and Cummings, and discusses some of the pertinent issues that future research in the area might address. Part VI lists the References Cited and contains four appendices which list the troops stationed at Fort Craig (Appendix 1), the monthly aggregate of troops (Appendix 2), the quarterly return of quartermaster's stores for the first three months of 1858 (Appendix 3), and the 1860, 1870, and 1880 censuses for Fort Craig (Appendix 4). ✠

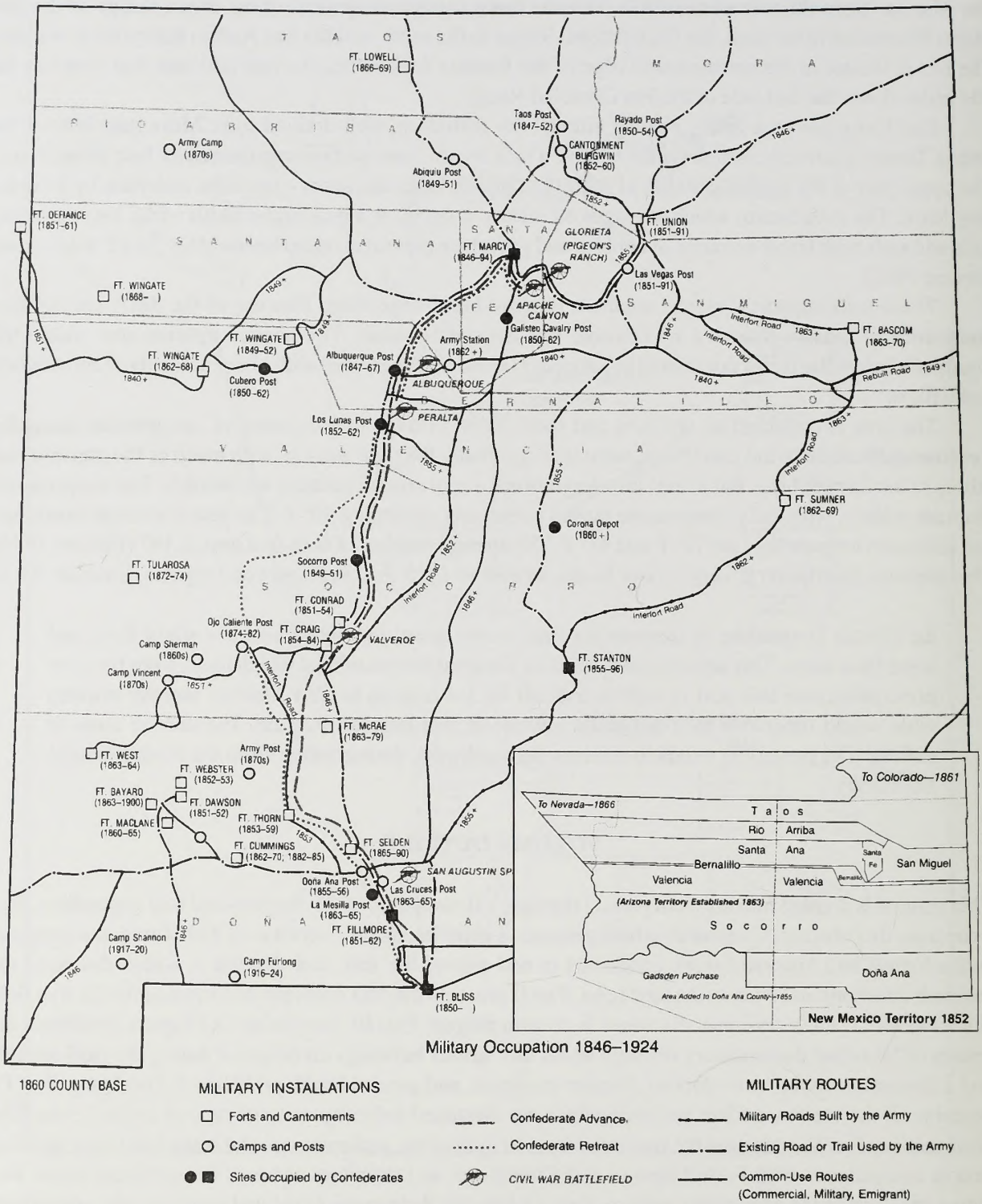
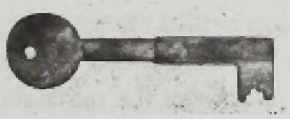


Figure 2.1. *New Mexico Territory, 1852 (inset) and U.S. army posts and roads, 1846–1924 (after Williams, ed. 1986:112, 364).*

Chapter 2

HISTORICAL CONTEXT & PREVIOUS WORK



BRIEF HISTORICAL OVERVIEW

THE FOLLOWING PAGES PRESENT a brief overview of the history of Fort Craig and the role it played in the frontier defense of the New Mexico Territory. For more detailed accounts, the reader is referred to Bender (1934, 1941) for the military role of the fort in the American Southwest, to Grinstead (1973) and Stanley (1963) for descriptions of life at Fort Craig, and to Horn and Wallace (1961) and Taylor (1996) for the Battle of Valverde. An excellent overview of Fort Craig framed within the context of the Battle of Valverde, the Indian Wars, and other military facilities is found in Carroll and Sebastian (2000).

Frontier defense was a major concern of the United States government from the early days of the new republic to the late nineteenth century (and remains a priority today). Prior to the Mexican War in 1845, various methods were undertaken to deal with this problem—land was purchased from different Indian tribes, an "Indian Country" was created, annuities and gifts were given, and a chain of forts was established along the edges of the frontier settlements or in the heart of Indian Country. As a result of the war with Mexico and the signing of the Treaty of Guadalupe Hidalgo in 1848, the American frontier was extended to the Pacific Ocean (Bender 1941).

The discovery of gold shortly thereafter in California attracted large waves of emigrants to the Far West. Likewise, the lands in the Southwest, which in earlier years had interested only traders, trappers, and merchants, now beckoned miners, speculators, land-hunters and homeseekers from the more populated regions of the East. This increase in settlers meant an increase in hostilities from native groups who resented these encroachments. These actions led to the establishment of a chain of military stations throughout the newly acquired territories (Bender 1941).

The territory of New Mexico, which included Arizona and southern Colorado (see inset, Figure 2.1), became part of the Ninth Military Department. The 1850 census report lists a population of some 61,000 whites distributed among the seven counties of the territory, along with approximately 6,000 peaceful Indians and an estimated 37,000 hostiles (Bender 1941). The contemporary press was filled with reports of periodic attacks on emigrants and scattered settlements, which brought about petitions for more troops. In addition, the Mexican government filed claims against the United States for Indian depredations from across the border.

In response, the War Department reinforced the original military posts along the Rio Grande, including

Fort Marcy at Santa Fe as well as posts at Taos, Albuquerque, and El Paso. In addition, troops were stationed at Socorro, Tomé, and Doña Ana, the latter two having garrisons of 20 men. Despite these buildups, the attacks and raids continued, and it became clear that a change of strategy in the distribution of troops was needed if the Indian problem was to be controlled. Secretary of War Charles M. Conrad strongly believed that the Indians were best overawed by a constant display of military force within their own territory and maintained that troops should be located as near the frontiers as possible. Both Quartermaster General Thomas Jessup and Conrad agreed that to be more effective, the troops should be removed from their locations in towns and small villages and placed in strategic areas along the frontier (Bender 1941; Grinstead 1973). By 1852, seven new posts were built. Three—Forts Conrad, Fillmore, and Union—bordered the Rio Grande, and the remaining four—Forts Defiance, Webster, Massachusetts, and Cantonment Burgwin—guarded the Navajo and copper mine country (Bender 1941).

Fort Conrad

Established in 1851, Fort Conrad was named for Secretary of War Charles M. Conrad. The fort was located on a mesa on the west side of the Rio Grande near the Valverde ford (Gregg 1968). Manned by the garrison from Socorro, its purpose was to protect the north-south route and to provide protection from hostile Indians (Frazer 1965). Conrad proved to be a hard-luck post, poor in location, poor in construction, beset with health problems, and engaged in litigation over the use of lands belonging to the Armendaris Grant (Gregg 1968; Grinstead 1973).

In the fall of 1853, Col. J. K. F. Mansfield visited the fort and found the adobe quarters of the enlisted men and officers deteriorating, the cottonwood timbers rotting, and many of the troops living in tents. Consequently, Mansfield recommended that Fort Conrad be abandoned (Giese 1976; Gregg 1968; Grinstead 1973). Seven months later, in April of 1854, the troops moved 9 miles south to occupy Fort Craig.

Fort Craig

Named for Capt. Louis Craig, who had been murdered by deserters in California two years earlier, Fort Craig's purpose was essentially the same as Fort Conrad's—to protect the settlers, control the hostile Indians, and guard the north-south route along the Rio Grande. Its location just off the Camino Real, the "Royal Road" that was the route to the administrative and market centers of northern Mexico, actually afforded better protection to travelers than its predecessor did (Bender 1934).

The fort consisted of a large complex of adobe and rock buildings surrounded by an earthen ramp and ditch with two bastions; a third bastion was never completed (Figure 2.2). The buildings included quarters for two companies, officers' quarters, quartermaster's offices and warehouses, a guardhouse, hospital, blacksmith shop, wagon yards, stables, a sutler's store, and a carpenter shop (Billings 1875; Headquarters, Military Division of Missouri 1876). The wall enclosing these buildings encompassed 1,050 by 600 feet, the longer dimension running roughly east to west (Billings 1875).

During its years of occupation the fort underwent only minor physical changes. Prior to the Battle of Valverde, the ramparts were placed around the fort and picket post structures were constructed for the additional troops sent here, three large casemates or storehouses were built in the southwest corner sometime in 1863 or 1864, a new hospital was built after the Civil War, the blacksmith shop was moved outside, and the magazine was removed from the center of the parade ground and rebuilt in the south half of the middle casemate. Aside from these changes and some remodeling within individual buildings, the layout of the fort remained basically the same as when it was first constructed.

Most quartermaster and subsistence stores were supplied from the depots at Fort Union, New Mexico, and Fort Leavenworth, Kansas, by rail and wagon route. Certain items, such as beef, wood, corn, hay, and some lumber were supplied locally by private contract to save the cost of military transport (Frazer 1983; D.

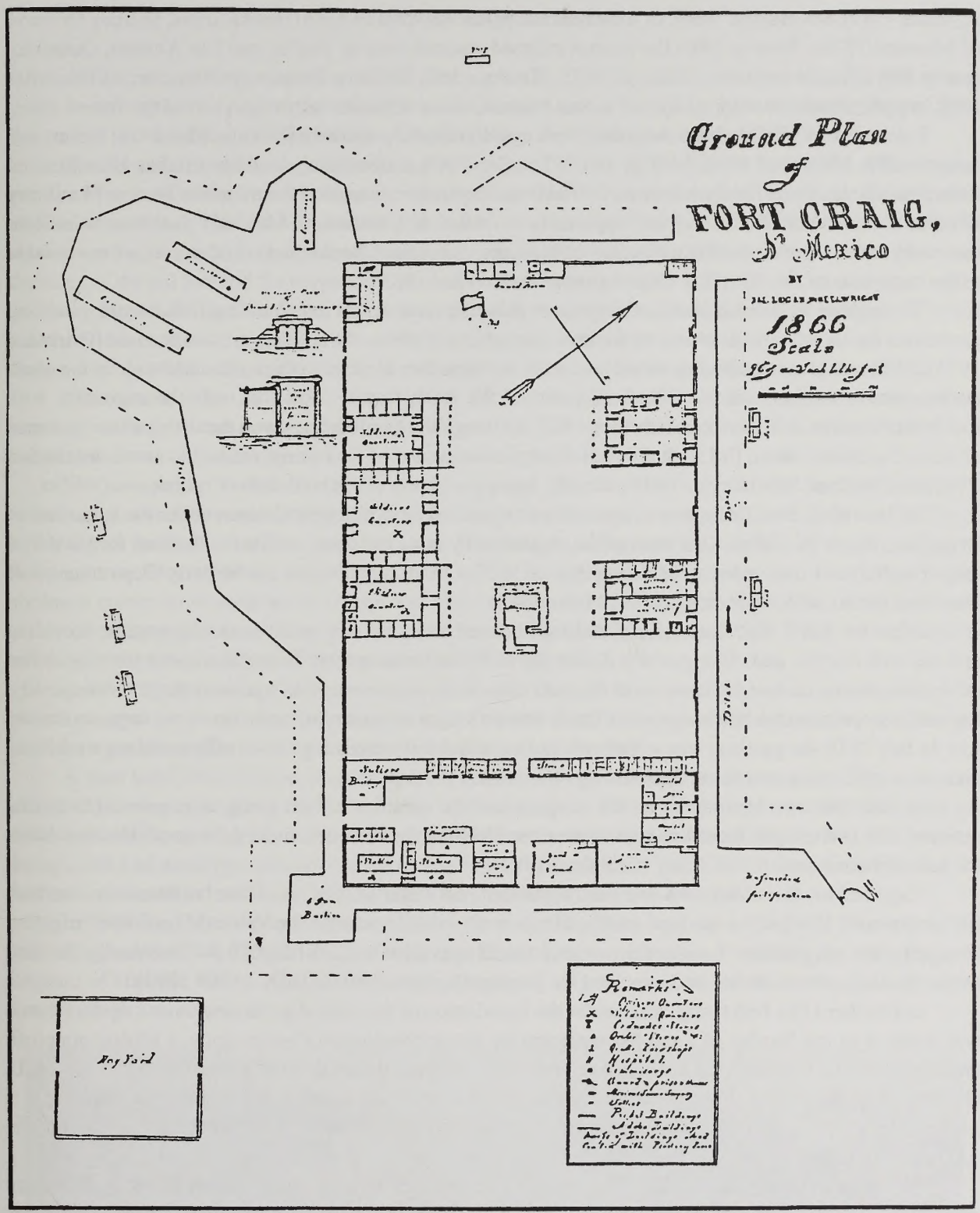


Figure 2.2. *Plan of Fort Craig, 1866 (Office of the Chief Engineer, RG 77, NARS).*

A. Miller 1989). Six months' worth of subsistence supplies was kept on hand (Headquarters, Military Division of Missouri 1876). Prior to 1880 the nearest railroad stations were at Pueblo and Las Animas, Colorado, nearly 500 miles to the north (Billings 1875; Headquarters, Military Division of Missouri 1876). After 1880, supplies could be shipped by rail to San Marcial, about six miles north (upriver) of the fort.

Life at Fort Craig has been described both negatively and positively (Bloom 1934–1938; Eckert and Amato 1978; Marchand 1966; McKay 1918; Trumbo 1947). Information on daily life has been gleaned from post returns. Both family letters and official correspondence mention the mundane routine of military life. For the most part, Fort Craig was apparently not a bad duty station, and by 1859 post returns indicate that many of the amenities of life, including newspapers, magazines, books, and social events, were available to the occupants of the fort (U.S. Department of the Interior 1983).

Throughout its 31-year history the garrison played an active role in combating Indians and providing protection for travelers and settlers in the area, though many times the soldiers arrived too late (Grinstead 1973). Settlements in the area flourished, and such towns as San Marcial to the north and Paraje to the south became active trading centers. The focal point of the fort's history, however, was the encounter with Confederate troops at Valverde in February 1862. Although the Confederates won the batle, at least in terms of tactical considerations, Col. Edward R. S. Canby, commander of Fort Craig, refused to surrender the fort (Horn and Wallace 1961; Taylor 1996), thereby leaving a Union stronghold at the Confederates' backs.

By late 1862, Fort Craig was occupied by troops from the California Column under the command of Brig. Gen. James H. Carleton, as most of the regular army units had been recalled to the East for Civil War duty. For the next five years, until September of 1867, Carleton controlled the Military Department, and later the District, of New Mexico (D. A. Miller 1982).

After the Civil War, the soldiers' routine returned to its normal pace—scouting parties, providing citizens with escorts, and other garrison duties. By 1870 the Indian problems had dissipated with the defeat of Victorio, and by the late 1870s the most frequent entry in the post returns was "garrison duty." Consequently, the military command in Washington felt that it was no longer necessary to maintain such a large and costly fort. In July 1878, the garrison was withdrawn and a small detail, consisting of one officer and seven enlisted men, was left to keep an eye on the buildings (Grinstead 1973:30).

In 1880 Victorio again went on the warpath and the facilities of Fort Craig were pressed back into service. This revival was short-lived; in September 1884 the fort was deactivated for good. By June 1885, the last of the troops left Fort Craig (Grinstead 1973).

Captain Jack Crawford, who had been appointed post sutler in 1881, continued to live at the fort with his family until 1894, when the land and buildings were sold at auction. The Valverde Land and Irrigation Company, the only bidder, bought the property for its appraised value of $1,070.50. Eventually the land reverted to private ownership and was used for grazing (Grinstead 1973; D. A. Miller 1993).

In October 1981 Fort Craig came under the jurisdiction of the federal government once again, when it was donated to the Bureau of Land Management by the Archeological Conservancy, a private nonprofit organization. The ruins and the surrounding 160 acres had been donated to the conservancy by Gen. H. L. Oppenheimer, President of the Armendaris Corporation, with the condition that it be turned over to a government agency that could provide management and protection for the site. Fort Craig lies within the former 1820 Pedro Armendaris land grant, which is now owned by Ted Turner.

The original Fort Craig Military Reservation covered an area measuring approximately 38 square miles, and the fort was situated nearly equidistant from the northern and southern boundaries of the reservation. Today the property consists of approximately 160 acres and for the most part is under the jurisdiction of the Bureau of Land Management. Except for the three storehouses, the guardhouse, the commanding officer's quarters, and the ramparts around the southwestern portion of the site, none of the buildings have standing walls; few of the mounds exceed a height of 1.5 m above present ground surface.

PREVIOUS WORK

Scholarly and site protection interest in Fort Craig spans several decades. It is only within the past twenty years, however, that the majority of efforts to record and document the history have occurred. Most of these documents are housed at the Laboratory of Anthropology (under site number LA 1091).

The first known recording of the area was done in 1932 by H. W. Yeo as part of his archeological survey of Socorro County. Yeo was primarily interested in prehistoric occupations, and his ceramic identification of prehistoric sherds indicated the fort may have been built on the site of a prehistoric pueblo. In remarks taken from Yeo's notebook on Socorro County, he states that "practically all the shards were found between the ruins of the old fort and the perpendicular bluff on the west edge of the valley. This area was a part of the dumping grounds of the fort. Some shards were found in adobe heaps that had formerly been adobe bricks which had been used in the construction of the fort. The bricks may have been made from surface clay where shards were dumped or from the clay from decomposed adobe bricks in the village site" (Yeo 1932).

Photographs taken of the buildings within the fort around the turn of the twentieth century show standing walls for the majority of structures (Figure 2.3). None of the buildings was still roofed, which meant that it was only a matter of time before erosional processes took their toll on the walls.

The next project occurred in 1958, twenty-six years after Yeo's survey, and was the first to focus on Fort Craig. Robert Utley conducted a survey of the fort for the National Survey of Historic Sites and Buildings. In his report he noted that "the walls of some 18 adobe buildings are still visible in varying stages of disintegration. One structure, on the southwest corner of the quadrangle, and a set of buildings on the northeast corner have walls ten to fifteen feet high yet standing. The volcanic rock walls of the jail house have not collapsed, but are being gradually dismantled by visitors" (Utley 1958). Utley was apparently referring to the commanding officer's quarters and the hospital.

In 1965 the Museum of New Mexico, as part of its Historic Sites Inventory, conducted four separate record searches on Fort Craig. Information was extracted from both primary and secondary sources and provides a good base for the documentation of the history of the fort.

A year later, John Wilson documented the condition of the site and made a small surface collection within the trash scatter along the eastern side of the fort (J. P. Wilson 1966a). Most of the buildings are described as being mounds of adobe, although wall outlines could still be discerned (Figure 2.4). The hospital, though, still had standing walls up to three meters high (Figure 2.5). In 1970, Wilson returned to the fort for further documentation and made another small surface collection from one of the trash areas.

In 1969 Lee Myers prepared a nomination form for the State Register of Cultural Properties. The following year, the State Cultural Properties Review Committee nominated the Fort Craig site to the National Register of Historic Places. The nomination encompassed only 15 acres, which did not include the entire fort area or the cemetery.



Figure 2.3. *Fort Craig ca. 1908 (Yeo Collection, Laboratory of Anthropology, Santa Fe)*



Figure 2.4.
1968 overview of Fort Craig taken from one of the casemates (LA 1091 file, ARMS, Santa Fe)



Figure 2.5.
1968 photograph of the new hospital (LA 1091 file, ARMS, Santa Fe)

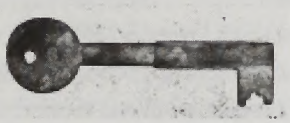
In 1982 Mike Marshall, with support from the New Mexico Historic Preservation Division, conducted the Rio Abajo survey. This survey covered the area from Fra Cristobal north to the southern boundary of the Sevilleta Wildlife Refuge. The majority of sites recorded were from the Pueblo period or earlier, and less emphasis was placed on the later sites such as Fort Craig, although both Forts Conrad and Craig and the outlying historic settlements received several paragraphs of mention (Marshall and Walt 1984). A prehistoric site, however, was documented by Marshall just south of the cemetery.

Limited stabilization work was undertaken on five of the fort's buildings in 1984 by Rio Abajo Archaeological Services as part of the BLM's interim stabilization plan (Gossett and Gossett 1985). The walls of the commanding officer's quarters, the masonry guardhouse, and the most eroded portions of the three adobe casemates were repaired. During the stabilization efforts, limited excavations conducted along the inside of the casemate walls represent the first professional subsurface tests carried out at the fort. Although no excavations were done in the commanding officer's quarters, vandals' holes revealed the presence of a prehistoric component underneath. This further supports Yeo's contention that Fort Craig was built on an abandoned prehistoric village.

Finally, in September of 1988, the University of New Mexico's Office of Contract Archeology conducted a cultural resources inventory of the Fort Craig Special Management Area (SMA) and completed Historic Building Inventory Forms, which documented the present structural conditions of the fort's buildings. The survey of the plains surrounding the fort mapped ten distinct areas of dumping episodes, located and recorded the area of the blacksmith shop, and documented a prehistoric component. This work effort formed the basis for the flagpole placement, the proposed location of the walking trail into the fort, and the proposed location of the parking lot within the SMA compound (Gerow 1988). ✠

Chapter 3

RESEARCH ISSUES & EXCAVATION STRATEGIES



ALL HISTORICAL EVENTS AND PROCESSES are assumed to be to some extent dependent on conditions present elsewhere. At Fort Craig, as at other military outposts located in undeveloped territory, national and regional processes were of great importance. Many of the research questions addressed during this project consider these conditions and processes explicitly in an attempt to place the history of Fort Craig in its proper, broader context.

Research at Fort Craig was structured to enable comparisons to be made with the results of archeological excavations at Fort Fillmore and Fort Cummings. The three decades of occupation of Fort Craig roughly encompassed the occupation span of these forts. Fort Fillmore was manned from 1851 to 1862 and Fort Cummings from 1863 to 1885. All three forts were designed to serve similar functions, and comparative study should result in a broader understanding of Southwestern frontier history. Thus the Fort Craig research design was modeled after those of Fort Fillmore (Powder 1988) and Fort Cummings (Staski 1989a), which center around two broad research topics—economics (both regional and local as well as personal), and environmental adaptation. The impact of vandalism on the integrity of the cultural resources has also been addressed (Gerow 1990).

As in all historical archeology projects, the documentary record can supplement and complement the interpretations generated from the study of the material remains. Thus both archival and archeological approaches have been followed, where possible.

ECONOMICS

The majority of research questions center around the broad theme of economics since data relevant to this topic are best derived from the archival and archeological records. This theme was broken down into more specific topics and categories—economic status of personnel, reliance on local economy, the effectiveness of the army at shipping supplies to the fort, and the role of the railroad.

Economic Status of Military and Civilian Personnel

As with other frontier military outposts, there were three recognizable economic groups at Fort Craig—officers, enlisted men, and civilian personnel. Differences in economic status between these groups appear to have been substantial.

Officers seem to have enjoyed a life similar to that experienced in more developed parts of the nation. More often than not they were accompanied by their families and were able to have personal household possessions with them at the fort. They partook in regular social events that were exclusive in nature and designed to emphasize the high status of the participants. Apparently they were supplied with many of the material goods reflecting a high standard of living, including fine wines, good foods, and other luxuries (Wallace 1972).

This image is in sharp contrast to the conclusions drawn by Herskovitz (1978) from his analysis of the historical materials recovered from Fort Bowie, Arizona, concerning the daily life of the enlisted man. He possessed few, if any, luxuries and, generally speaking, a small amount of material goods. Life was difficult, lonely, and boring for the most part, with few social occasions to attend. A similar existence has been described for the enlisted men at Fort Craig (Grinstead 1973; Stanley 1963).

When compared with the life of civilian personnel, however, the meager existence of the enlisted men could almost be considered well-off. For the most part, these individuals consisted of Indian scouts in the service of the army, laundresses, cooks, and others in various supporting roles. Oftentimes they were thought of as second-class citizens, and treated as such (Staski 1989a).

What then was the nature of the economic differences between the officers and enlisted men, and the enlisted men and civilian personnel, at Fort Craig? Were there dramatic economic differences among these three groups or only minor differences?

These questions were addressed by examining the availability of a number of commodities and the presence of architectural features that reflect economic status. The availability of luxury goods can be measured in terms of evidence of wines, spirits, utensils, china, and other imports. In terms of architecture, such features as flooring type, number of fireplaces and stoves, and the sizes of rooms can be determined. Both archeological and documentary data were collected to obtain these descriptions.

Status of Black Soldiers

Because the new hospital had a specific ward designated for the African-American soldiers, a new research topic regarding the equality of the black and white enlisted men was investigated.

Between 3,300 and 3,800 black soldiers served at one time or another at eleven military installations in the New Mexico Territory during the years 1866 to 1900 (Billington 1991). At Fort Craig, companies from three different units were stationed there between 1866 and 1881—Company A, 125th Infantry from November 1866 to April 1867; Company B, 125th Infantry from May to October 1867; Company C, 38th Infantry from October 1867 to January 1869; Company D, 38th Infantry from May to October 1867; Company B, Ninth Cavalry from November 1876 to May 1877; and Company D, Ninth Cavalry from December 1880 to December 1881 but on detached service to Ojo Caliente from January to October 1881 (Agnew 1971).

These soldiers faced many obstacles, including poor housing, inferior animals, worn-out equipment, bad food, and racial prejudice. Despite these obstacles, black soldiers made significant contributions in the territory and were instrumental in helping to subdue and control various hostile Indian groups (Billington 1991).

Did the black troops stationed at Fort Craig face obstacles such as those noted above? While we were not able to determine the exact rooms they inhabited in the soldiers' quarters, the new hospital had one ward specifically designated for them. Archeologically we were able to address this added research issue by comparing architectural features found in the black ward with those found in the white ward, and by comparing the quality and types of artifacts recovered from the two wards.

Reliance on Local Economy

When Fort Craig was established in 1854, a couple of small farmsteads were located at Valverde near the old site of Fort Conrad. By 1860 villages had been established at San Marcial and Paraje, and the U.S. Census listed 90 people living at Valverde (Marshall and Walt 1984). Various records indicated that these villages

were closely linked with the military establishment at Fort Craig (Stanley 1963), and some, such as Paraje, suffered serious decline when the fort was finally deactivated in 1885 (Marshall and Walt 1984).

To what degree, then, was the fort dependent on the local economy? This issue was addressed through the examination of locally or regionally produced items such as Rio Grande Pueblo matte-painted ceramics and Hispanic-produced Carnue ware (Marshall and Walt 1984). Attention was also given to architectural materials, such as adobe and finished lumber, in an attempt to determine the degree to which local materials and labor were required. Archivally, an examination of contracts for provisions, fodder, etc., and duty rosters aided in addressing these issues.

Effectiveness of the Army's Shipping of Goods

Results from excavations at other frontier forts in the Southwest indicate that goods reached these outposts on a fairly regular basis. Items exhibiting new manufacturing techniques appeared shortly after their development. Johnston (1989), for example, notes that Harper's Ferry bullets, developed in 1855, arrived and were used at Fort Fillmore prior to its abandonment in 1862. In addition, the 1852 model of the Sharps Carbine issued to the First Dragoons in 1854 and 1855 was also present at Fort Fillmore.

A similar situation probably existed at Fort Craig owing to its proximity to the Santa Fe–Chihuahua Trail. Fort Craig also served as a minor supply depot for many of the other southern New Mexico military installations, which implies that goods were shipped regularly to the fort.

How effective, then, was the United States Army in shipping supplies from the east to Fort Craig? This issue was addressed by measuring the period of lag between dates of manufacture and dates of use and deposition for a number of items, including bottles, ceramics, and ammunition (Hill 1982).

Another means of addressing this issue was to examine artifacts for evidence of reuse. It is assumed that extensive reuse on items is evidence for an unreliable supply of imported goods (Schiffer 1987). Reliance, too, was placed on documentary evidence such as quartermaster's reports and post return notations, which dealt with supplies to the fort.

Role of the Railroad

By 1881, the Atchison, Topeka & Santa Fe Railroad extended from Santa Fe to El Paso. The town of New San Marcial, six miles north of Fort Craig, became a major rail terminus and freight depot (Marshall and Walt 1984). In fact, some of the new troops stationed at Fort Craig after its reactivation in 1880 arrived by rail at San Marcial (Grinstead 1973).

That the railroads played a significant role in the development of the Southwest cannot be disputed. Their presence resulted in an increase in the Euroamerican population, a rise of new towns, and an influx of material goods from the settled portions of the United States (Staski 1989a). Their impact on the frontier forts was also profound and is clearly visible in the archeological record. Herskovitz (1978) reports an increase in material goods dating to the later years of occupation at Fort Bowie, which coincides with the construction of the Southern Pacific Railroad.

How much of an impact did the railroad have on Fort Craig during its last four years of occupation? Archeologically this question was addressed by examining the quantity and types of commodities reaching the fort during those last four years of occupation. Archivally, documents such as quartermaster's supply reports were used to address this issue.

ENVIRONMENTAL ADAPTATION

The locations of frontier forts were determined by both strategic and environmental conditions. Strategic matters dictated the placement of forts in general areas, such as Fort Craig's position near the Santa Fe–

Chihuahua Trail and the beginning of the Jornada del Muerto. In terms of the environment, forts were usually constructed in areas where maintenance and even survival was possible; although in some instances, such as with the location of Fort Conrad (Grinstead 1973:3–4), this was not always true!

Of primary importance for all Southwestern forts was a reliable source of water; secondary requirements included a good supply of wood for construction and fuel (Herskovitz 1978; Wallace 1972). Fort Craig is situated on a terrace 72 feet above the Rio Grande, overlooking the bosque, which meant that both water and wood were readily available. How effectively did the soldiers at Fort Craig adapt to the local environment? Were there times when the lack of water or fuel was a major problem, or were these resources always plentiful?

Utilizing both archival sources and archaeological evidence, an attempt was made to measure the availability of both water and wood. Specific archeological data included structural features used for water storage and conservation, the extent of wood burning evident in fireplaces and chimneys, the amount of wood used in structures, and the nature of the wood recovered (e.g., species, condition).

In addition, attempts were made to determine how much reliance was placed on hunting, fishing, and the cultivation of foodstuffs as supplements to the soldiers' diet. According to an 1874 army report, the vicinity around Fort Craig was rich in wildlife, fertile soils, and grazing pastures (Gregg 1968; Stanley 1963). At times the fort had pigs "on the hoof" and possibly chickens, as a chicken house was listed among the items sold to the Valverde Land and Irrigation Company in 1894 (Grinstead 1973).

What, then, was the relative importance of domestic versus wild animals in the diet of the soldiers at Fort Craig? How much of a role did locally grown grains and vegetables play in the soldiers' diet? These issues can best be measured archeologically through analysis of the faunal and botanical remains found in garbage dumps.

IMPACT OF VANDALISM

There is no question that relic hunters and other people have visited the site of Fort Craig repeatedly. One only has to walk around the outer perimeters of the fort or look inside the remains of structures and see the holes dug or the modern trash scattered about. To what extent has this vandalism interfered with the integrity of the site? Documentary evidence, such as old photographs, and examining the archeological deposits can help to identify sources of disturbance and the extent of the impact.

SUMMARY

Most of the preceding research issues are aimed at a better understanding of daily life at a frontier fort. The archeological record, when combined with the documentary record, provides a more complete picture of daily life since one record often fills in the gaps left by the other. For example, Herskovitz (1978) notes that while contemporary accounts such as those of Bourke (1891) and Summerhayes (1939) depict many aspects of frontier military life, some details are omitted or glossed over—but these details are evident in the archeological record. For example, examination of various documents has provided no information regarding the soldiers' mess at Fort Craig. We do not know if the soldiers had cooks, cooked for themselves, or cooked in small groups (Charlie Carroll, BLM Socorro Resource Area, personal communication 1990) Excavations within the soldiers' quarters provided some answers to this question. Thus, the archeological investigations at Fort Craig were able to fill in details not depicted in the archival record.

Although not a primary focus of the archeological investigations at Fort Craig, one other aspect that was addressed was the nature and extent of the prehistoric use of the site area. Prehistoric components were recorded near the cemetery by Marshall and Walt (1984) and on the eastern side of the fort by the Office of Contract Archeology (Gerow 1988). Gossett and Gossett (1985) also noted that vandal holes within the

commanding officer's house revealed the presence of a prehistoric component underneath. Some prehistoric artifacts were recovered during the course of investigations, but most of them came from within the wall and roof fall mixed strata. No in situ prehistoric materials were found.

EXCAVATION STRATEGIES

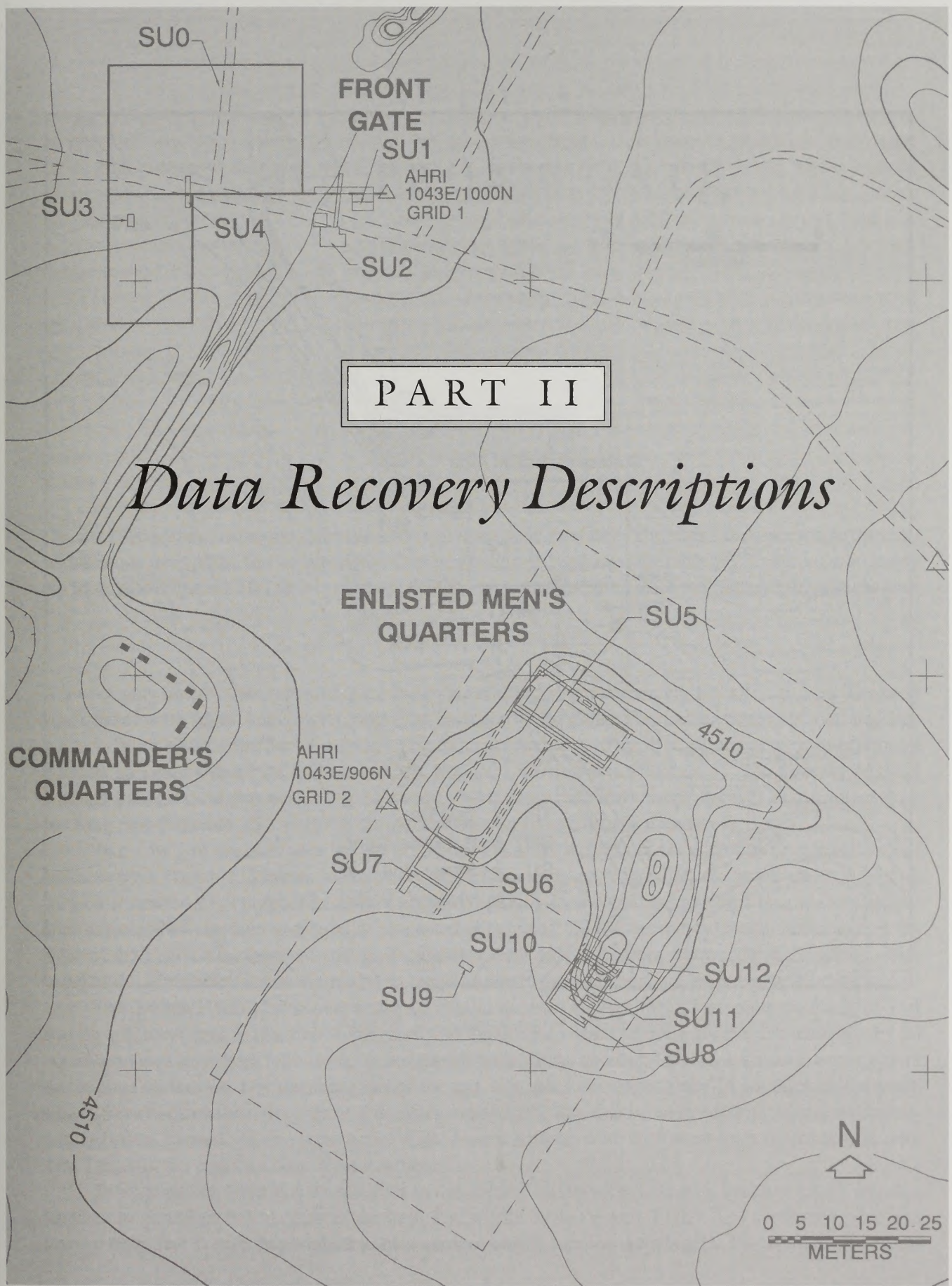
Although there was considerable variability in the work effort allocated to the investigation of the various rooms and other areas, the same fieldwork and analysis procedures were employed throughout all five sessions. The first step in investigating the site was to lay north/south and east/west baselines, which were used throughout all the field seasons. These lines were tied into aerial photo control points located at various locations in and around the fort area. An existing topographic map then was augmented using a transit. As fieldwork progressed, the locations of surface collection units, excavation grids, and backhoe trenches were added to this map to provide a summary record of the site's structure. To facilitate the excavations within the various rooms, the grid was rotated to make the excavation units parallel to the walls.

During excavation, all materials were screened through eighth-inch mesh and all materials recovered were provenienced by 1 m square and arbitrary or natural stratum. These collected items then were assigned a unique field specimen (FS) number. Artifacts recovered in situ were point-provenienced within the unit and assigned their own FS number. All work was thoroughly documented through a combination of narrative description, photographs, scale drawings, plans, and profiles.

At the conclusion of each field season, all excavation units were backfilled. Aluminum cans were placed in the bottom of each unit as a marker for future researchers. The excavation units were covered with plastic for protection before backfilling, and corner grid pins were kept in place so that any future excavations could be tied into the existing grid system. ✠



Figure 3.1. *Volunteers excavating in the new hospital.*



PART II

Data Recovery Descriptions

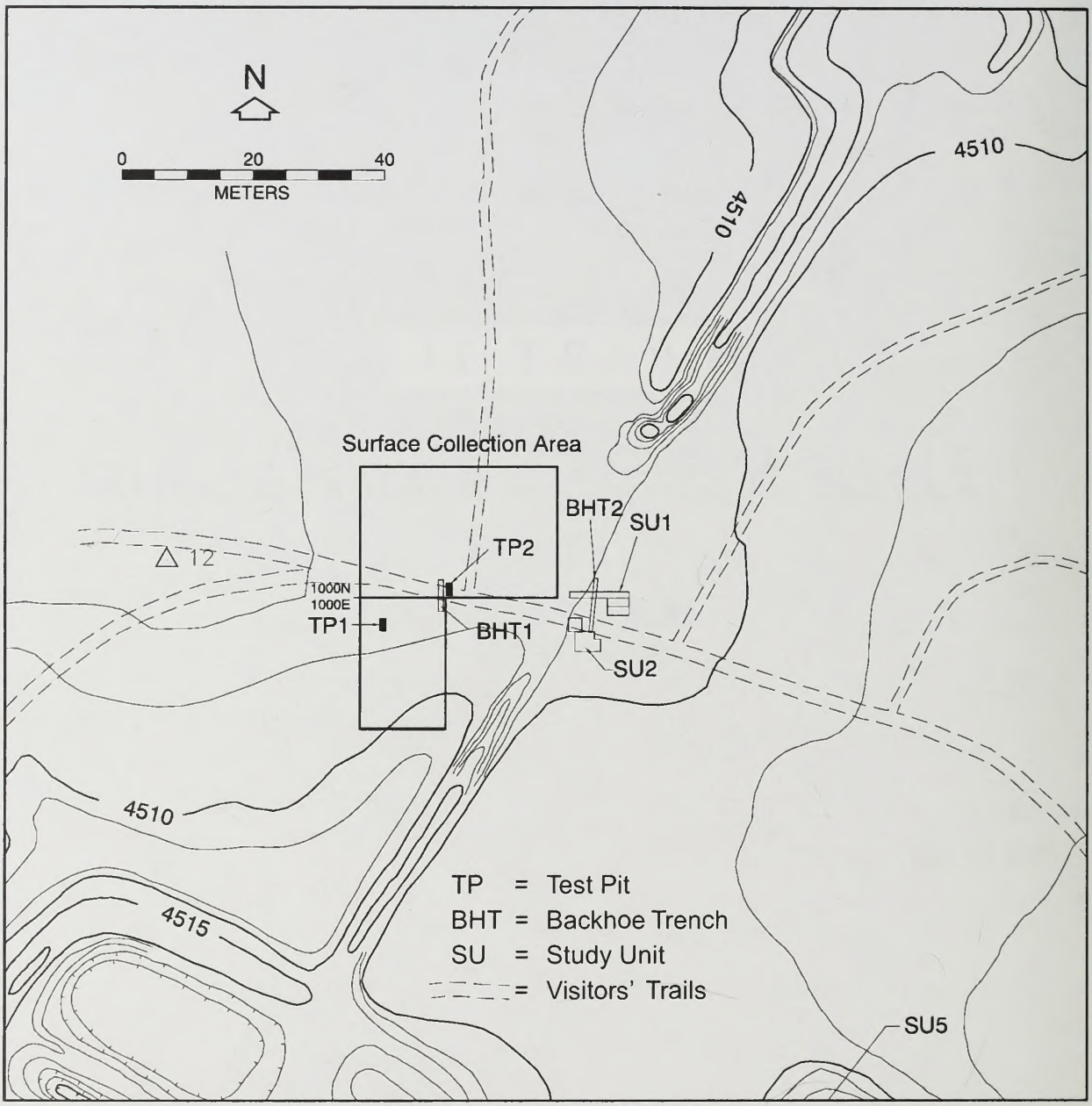
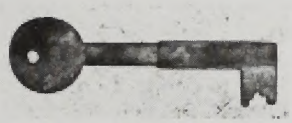


Figure 4.1. *Location of data recovery units at the front gate.*

Chapter 4

THE FRONT GATE



FOR THE 1990 SEASON THREE AREAS WERE INVESTIGATED around the front gate. The work effort focused on the trash scatter in the front of the fort and portions of the two buildings flanking either side of the visitors' trail inside the front gate (Figure 4.1). These areas were going to be impacted by the new walking trail through the fort.

TRASH SCATTER

A low-density trash scatter just outside the front gate covered an approximately 107 by 91 m area. The trash consisted of bottle glass, bone, metal fragments, and ceramics. This area is bisected by the visitors' trail into the fort. Two surface collection units, one 13 by 20 m and the other 20 by 30 m, placed in the area of densest artifacts on either side of the trail recovered a total of 1,689 artifacts (Figure 4.2). The majority of these artifacts were glass fragments (1,030), followed by bone fragments (480), metal pieces (129), ceramics (33), smoking pipe fragments (5), ammunition (4), buttons (4), and unidentified items (4).

Two 1 by 2 m trenches were excavated by hand in areas with black ash and dense concentrations of artifacts. Test Trench 1, located on the south side of the trail, was dug to 60 cm below modern ground surface (Figure 4.3). The profile of this trench (Figure 4.4) showed an ash/trash lens that measured approximately 20 cm deep and overlay laminated silty sands. Rodent activity was also noticeable in the sides of the trench. One hundred and ninety artifacts were recovered from this trench, the majority (144) being bone. A macrobotanical sample taken from the blackened sediments yielded no charred remains.

Test Trench 2 was placed over a stained area in the trail located about 5 m to the northeast of Test Trench 1. Excavations in this trench indicated that the stained sediments were sheet wash underlain by 20 cm of laminated silty sands followed by rocks/gravels with caliche nodules. This lower stratum may represent the original surface used by the occupants of the fort. The ash stain ranged from 14 cm thick on the south side to 6 cm thick on the north side. A macrobotanical sample was also taken from these stained sediments, but, again, no charred remains were noted. Eighty-eight artifacts were recovered from this trench; as with Test Trench 1, the majority were bone fragments.

To augment the hand-dug excavations in this area, a 75-cm-wide, 5-m-long backhoe trench was dug adjacent to Test Trench 2 to crosscut the trail. The profile of this trench (Figure 4.5) confirmed what was learned from Test Trench 2—secondary sheet wash and trash deposits underlain by 35–40 cm of silty sands



Figure 4.2. *Volunteers conducting the surface collection in the trash scatter near the front gate.*



Figure 4.3. *Volunteers drawing the profile of Test Trench 1 at the front gate.*

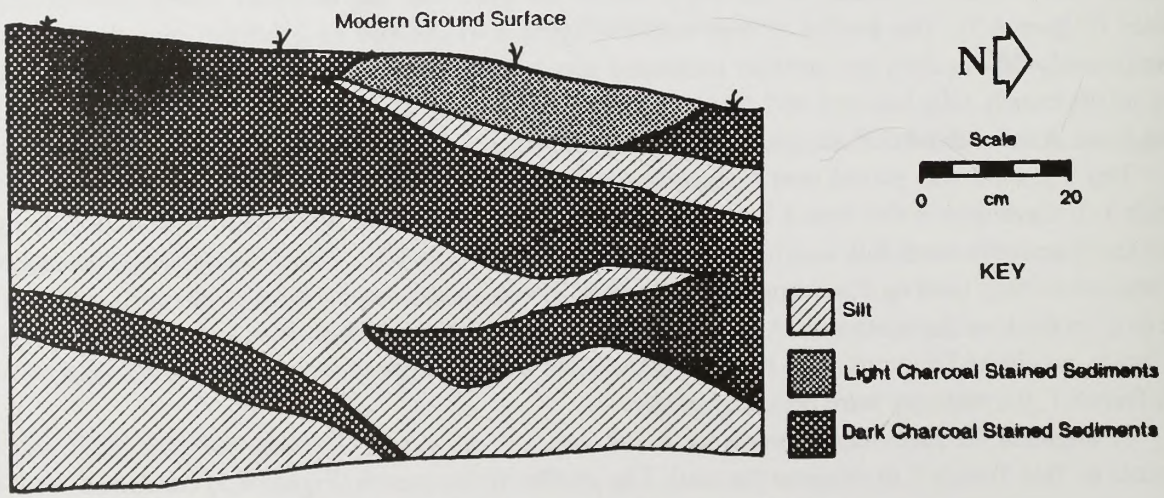


Figure 4.4. *Profile of Test Trench 1 at the front gate.*

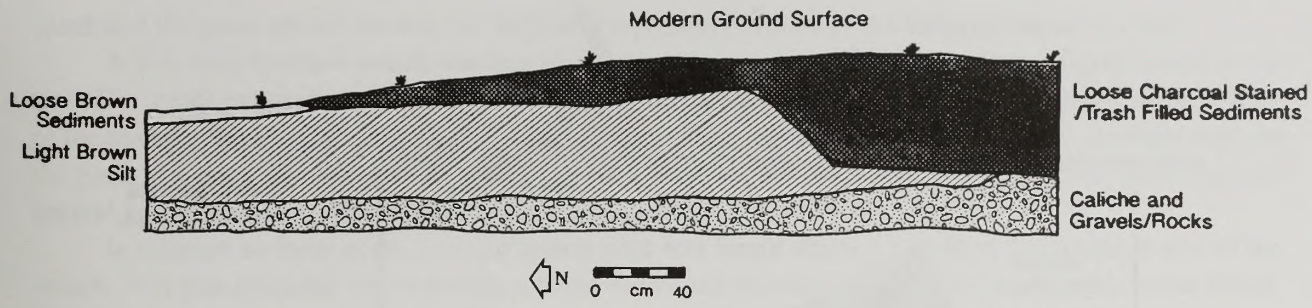


Figure 4.5. *Profile of Backhoe Trench 1 at the front gate.*

followed by rocks/gravels with caliche nodules. A deeper pocket of ash/trash visible on the southern end of this trench probably represents the source of the sheet wash.

Based on the stratigraphic profiles from the two hand-dug trenches and the backhoe trench, it appears that these trash/ash lenses represent secondary deposits. If indeed the rock/gravel/caliche nodule stratum marks the original ground surface of the fort, then these trash deposits were probably made after the fort was abandoned. This premise is supported by Surgeon General's Circular No. 4 (Billings 1870:246) which states that "refuse is removed in carts and deposited below the hill, where it is burned."

STUDY UNIT 1

Study Unit 1 is the excavation units north of the walking trail, inside the front gate. The basalt guardhouse with its two adobe rooms in front is located on this side of the trail, and the excavation units were dug here to explore the southern wall of this complex. Matrix totaling 14 m^2 was excavated in this area but no walls were encountered. The stratigraphy consisted of 25–30 cm of silty sand underlain by caliche/gravels. Artifacts recovered were primarily glass fragments (114) followed by bone (73), including the upper mandible of a sheep. Also recovered was the lower portion of a square-toed boot/shoe and pieces of purple/brown felt. As is apparent from the silty sand stratum, however, these excavation units exhibited little depositional integrity.

STUDY UNIT 2

Study Unit 2 is the 15 m^2 area excavated in the south guardhouse, later the commanding officer's office, on the south side of the trail. These excavations exposed portions of the north wall of this structure and what may be remnants of the floor (Figure 4.6). The wall measured approximately 50 cm wide, 3.5 m long, and sat approximately 60 cm above modern ground surface. Heavy rodent burrowing had destroyed the western end. The wall was made from adobe bricks measuring approximately 23 by 46 by 10 cm. The interior exhibited evidence of a 2- to 3-cm-thick mud coping covered with a thin veneer of white plaster.

The possible floor remnants consisted of 5- to 8-cm-thick, hard-compacted dirt located approximately 75 cm south of the wall. Rodents had also disturbed the majority of the floor surfaces. Several adobe bricks were sitting on the floor but no artifacts were found.

A 1 by 1 m unit was excavated to a depth of 50 cm below the floor, and a 40-cm-deep auger hole was punched down below this lower level. The matrix under the floor consisted entirely of slightly compacted silty sands. A few artifacts were recovered from the first 5–6 cm below the floor.

Outside the wall, underneath the wall fall, a two-inch by eight-inch plank was abutting the wall at a right angle. A square vertical post was evident under the end of the plank nearest the wall. Approximately 1 m to the northwest, a row of vertical posts was also revealed. These posts were located about 1 m from the wall and ran parallel to it for about 1 m before turning a 90° angle to the northeast. The functions of the

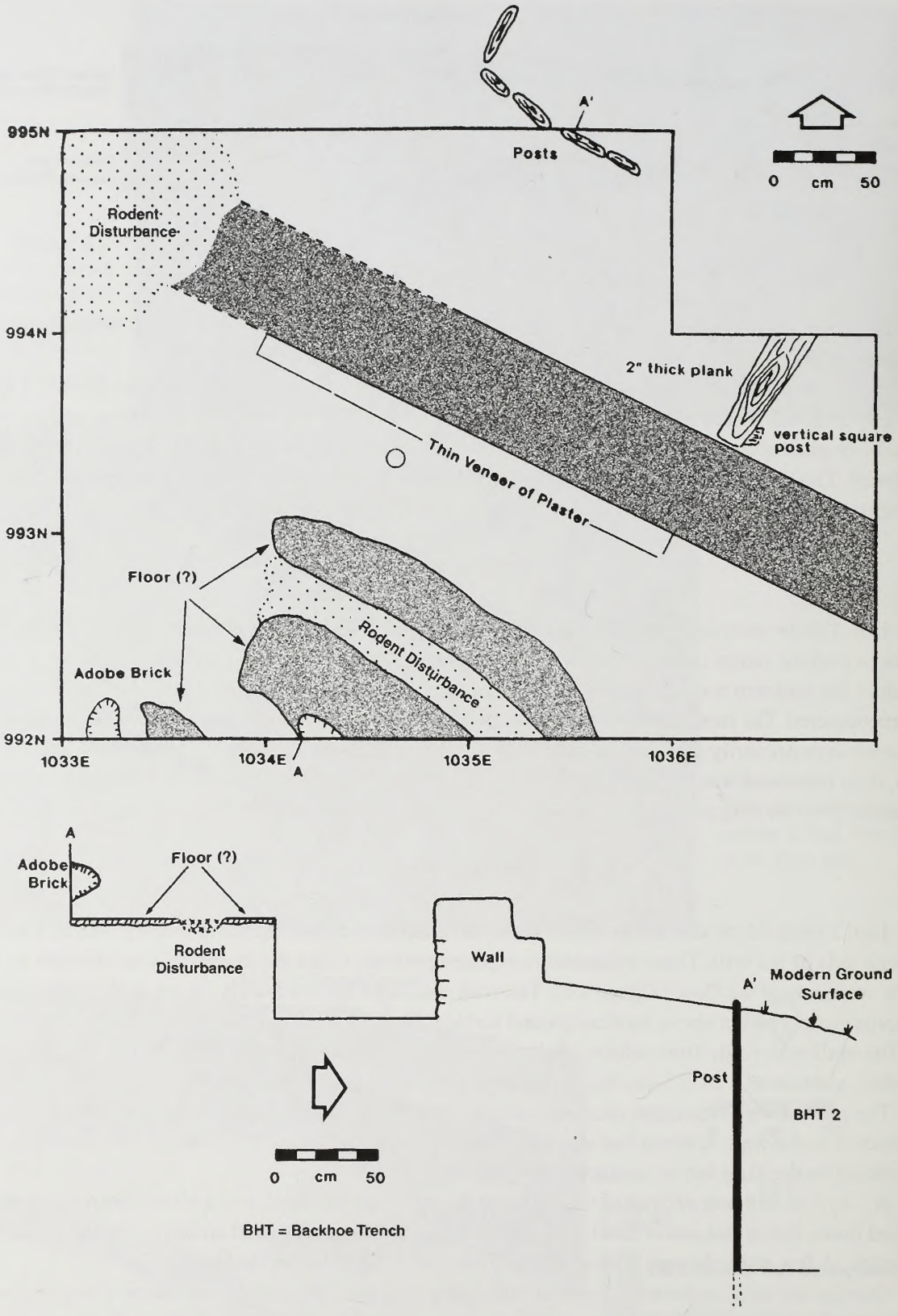


Figure 4.6. Plan view and cross-section of Study Unit 2 at the front gate.

plank and the posts are not known, but they may represent portions of the sallyport superstructure.

A 9-m-long backhoe trench was dug to examine these posts and to assess the stratigraphy across the trail. The trench exposed more than a meter of the posts, and an 18-cm-deep auger hole placed in the bottom of the trench indicated that they extended even deeper. More vertical planks were exposed at a right angle to the posts (Figure 4.7). Adobe chinking was evident between the posts and planks. A small glass vial and several nail fragments were recovered near the posts at the bottom of the trench.

In addition to these posts, a single square post was found about 1.5 m from the southern end of the trench. This post extended for more than a meter below the bottom of the trench; the end was never found. This post could represent a portion of the gate support system.

The remaining stratigraphy within the trench was fairly consistent with that of Backhoe Trench 1. A 30- to 35-cm-thick lens of silty sand was underlain by 15–20 cm of caliche gravels followed by cobbles and gravels. This stratigraphic sequence confirmed what was found in Study Unit 1.

A total of 1,482 artifacts came from the excavation units in Study Unit 2. Most of these artifacts were recovered from the wall fall matrix and the fill above the floor. The majority were glass fragments, primarily flat glass, followed by unknown metal and nail fragments and pieces of wood trim/shingles. Other artifacts included bone, ceramics, leather scraps, buttons, smoking pipe fragments, and ammunition. Several pieces of the wood trim exhibited a teal-blue paint, and several pieces of window caulking had evidence of brick red paint.

Originally, we thought that the wall alignment was at a different angle than that shown on the existing plan views of the fort. This proved not to be the case, as is clear when the plan of the excavation units is superimposed over these maps. What is not shown on these maps, however, is a plan of the front gate. More archaeological and archival research is clearly needed before we can understand the function of the vertical posts and their relationship to the guardhouse and the front gate. ✠

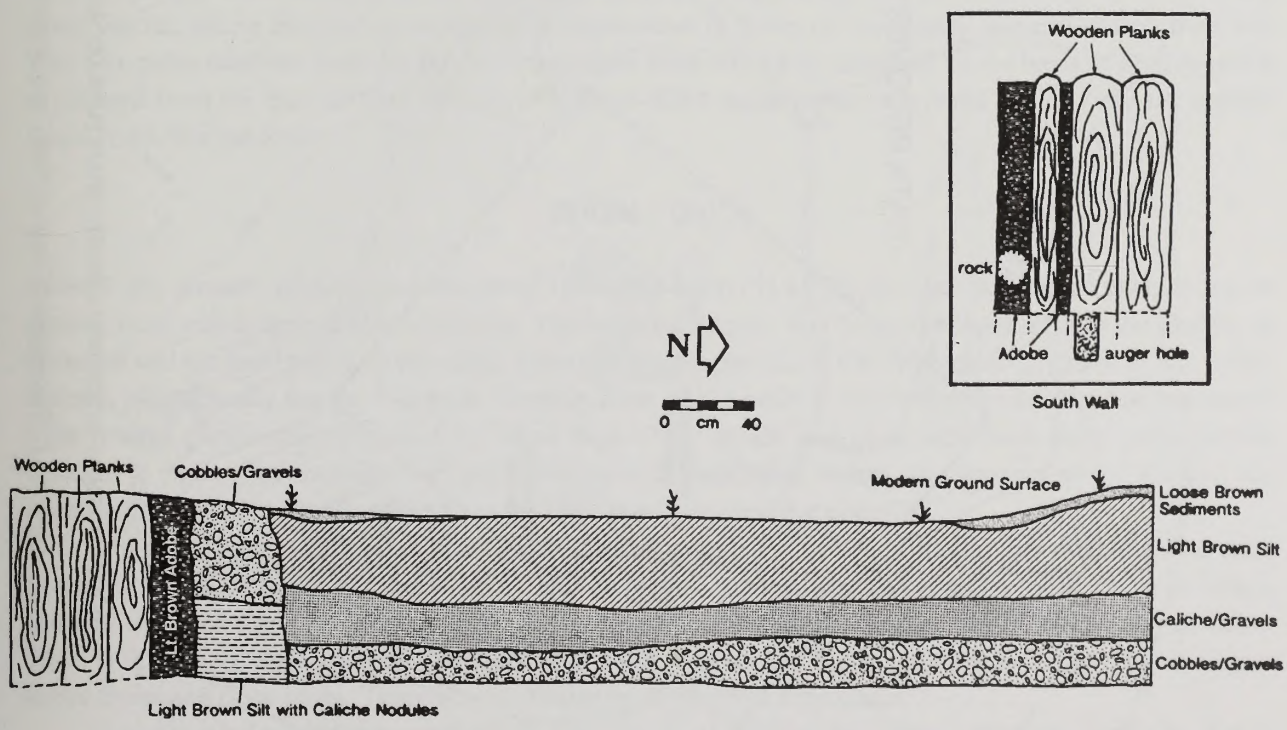


Figure 4.7. Profile of Backhoe Trench 2 at the front gate.

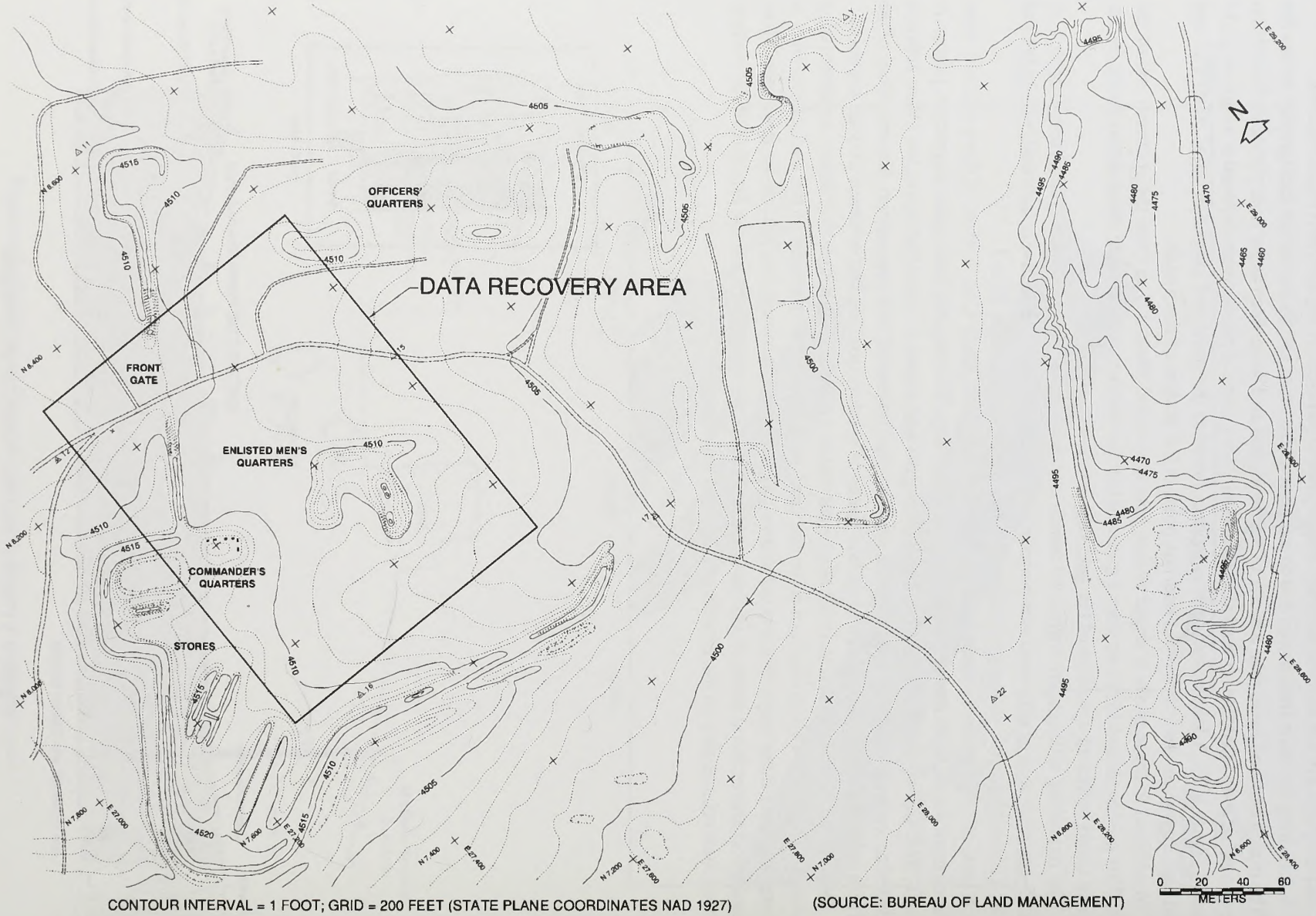


Figure 5.1. *Topographical map of Fort Craig showing enlisted men's quarters and their relationship to the front gate.*

Chapter 5

THE SOLDIERS' QUARTERS & BAKERY

Peggy A. Gerow & Jeanne A. Schutt



THE 1991 INVESTIGATIONS FOCUSED ON FOUR ROOMS within the western soldiers' quarters—the last two rooms on the western side, the westernmost squad room, and the bakery (Figures 5.1 and 5.2). In addition, a 50-cm-wide trench was excavated in the room abutting the north side of the bakery and a 1 by 2 m trench was excavated within the trash scatter behind the soldiers' quarters.

The soldiers' quarters were laid out in a U. This self-contained unit housed an entire company of men. Two squad rooms or dormitories were built across the northern or front end, with kitchens, mess rooms, storerooms, and laundresses' quarters located on the sides. The two ells and front rooms partially enclose a small placita, where picket-post rooms were constructed in times of emergency, such as during the Civil War. The room numbers used during the excavations were arbitrarily assigned on the basis of their location as counted from the front of the building, with the western squad room designated Room 1 and the eastern squad room labeled Room 2.

ROOM 1 (SU 5)

Room 1, the western squad room, measured 15.5 m by 6.1m (51 by 20 feet) and had an entryway along its eastern wall, which opened into a hallway. The hallway, in turn, had doors that opened onto the placita on the south and the front porch on the north. Time constraints precluded the complete excavation of this room. Instead, judgmentally placed 1-m-wide trenches were dug in order to maximize the information recovered from limited excavations (Figure 5.3). More than 47 m^2 of fill was excavated from these cross-section trenches to expose the southern wall and portions of the northern, eastern, and western walls; some of the front porch joists and floorboards; the jaspe floor remnants; and the chimney.

The walls were constructed of adobe bricks measuring 19 by 8 by 4 inches and were covered with several layers of white plaster underlain by half an inch of mud coping. The wall remnants range in height from 30 to 42 cm above the floor, which means that upwards of 10 feet of wall have melted away or fallen down (Figure 5.4). Some plaster with dark blue paint was evident along the outside of the front wall just above the porch floor joists. There was no evidence of a cobble foundation.

Also revealed was what appears to be a bench (banco) abutting the interior of the southern wall. It was constructed of adobe bricks the same size as the wall bricks and extending along the entire length of the

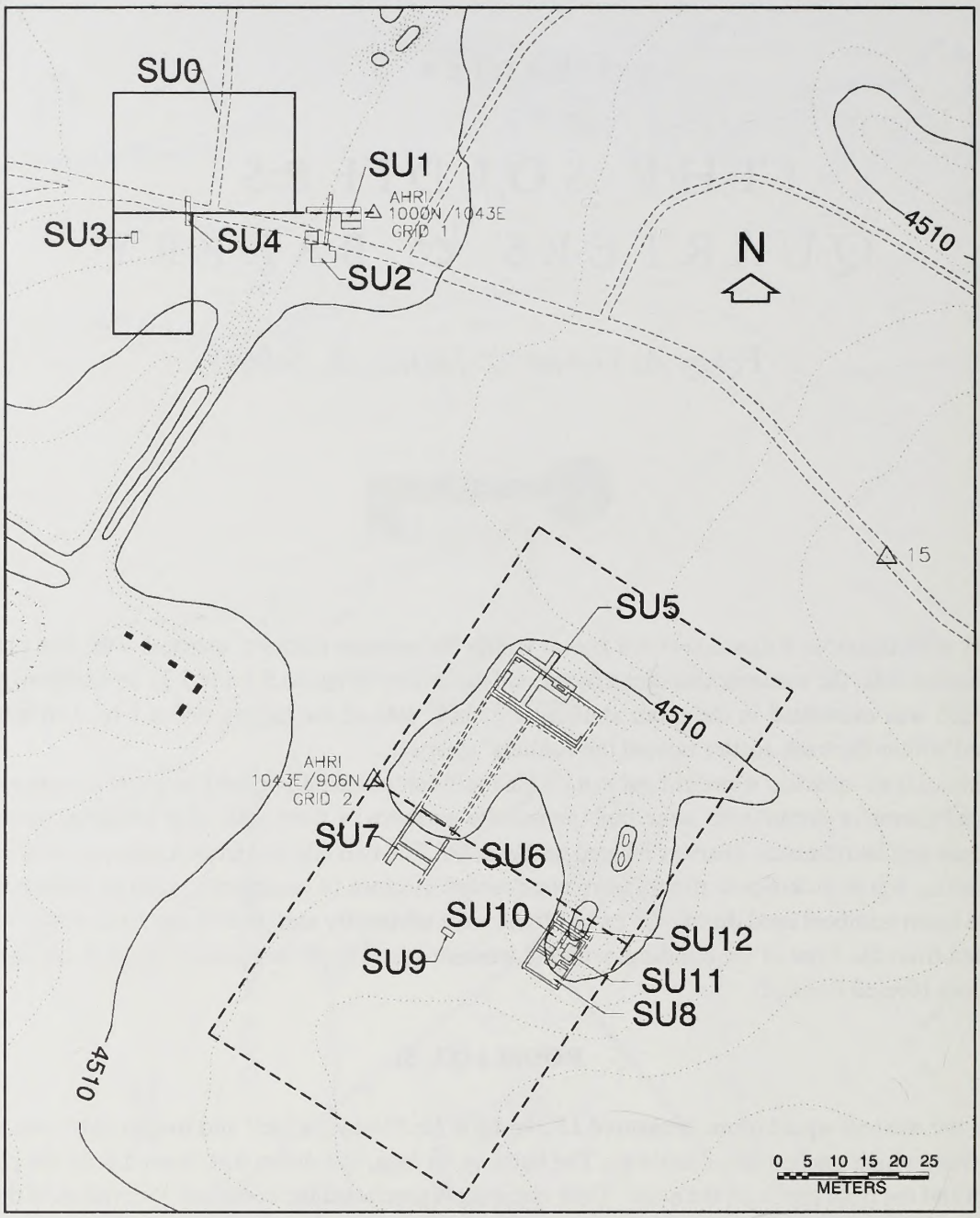


Figure 5.2. Location of 1991 data recovery units in relation to those of 1990.

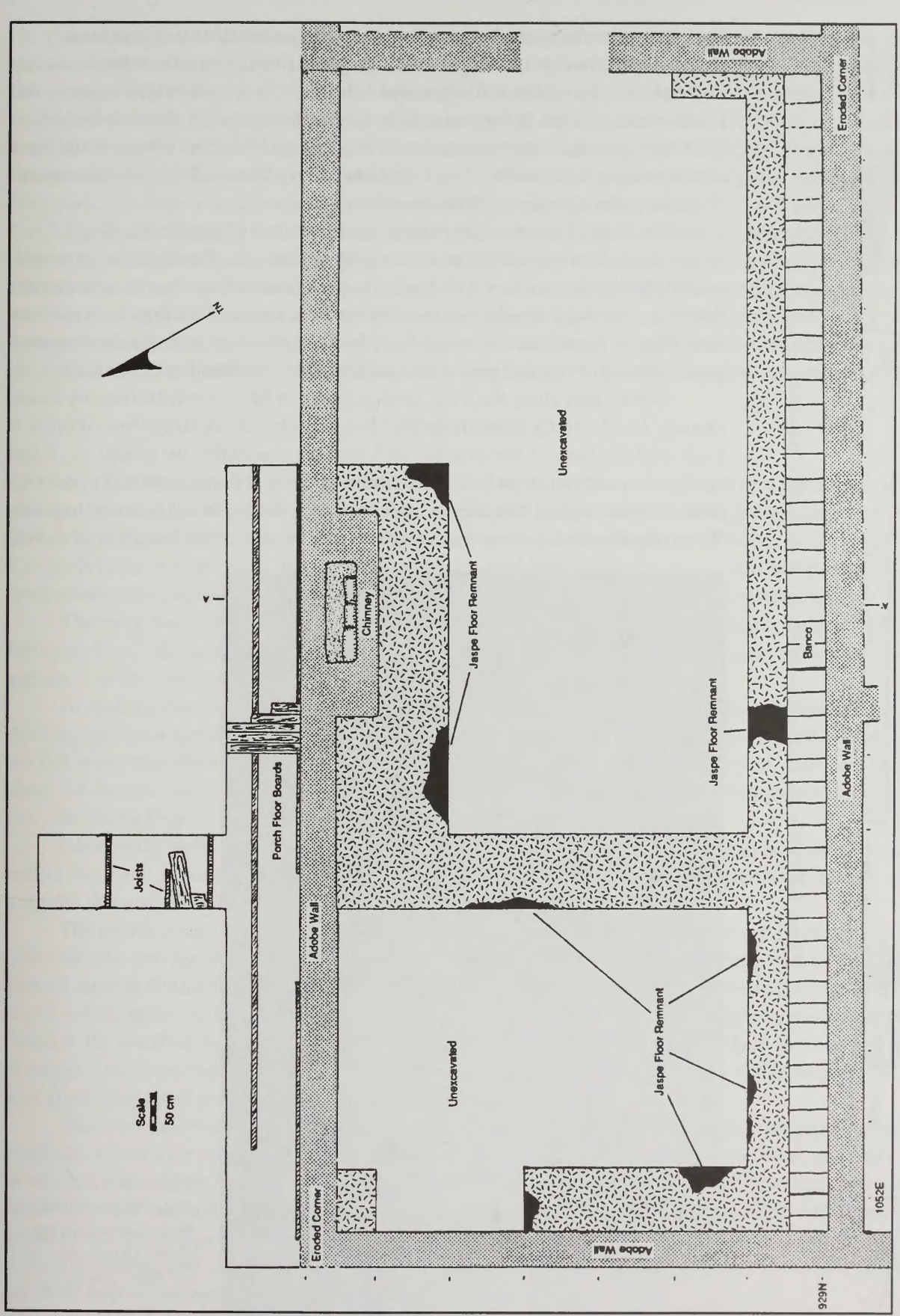


Figure 5.3. Plan of Room 1 excavations at the soldiers' quarters.

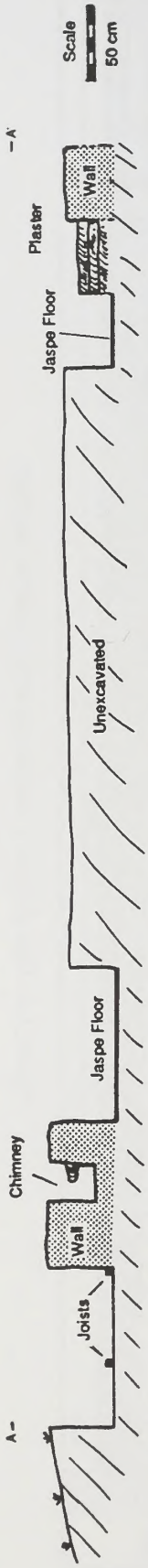


Figure 5.4. Profile and cross-section of Room 1 in the soldiers' quarters.

wall, though severely eroded in the southeastern corner. It was approximately 2½ feet above the floor and exhibited mud coping and plaster along the front. Remnants of the plastered southern wall were visible behind this feature, which suggests that it was a later addition to the room. Although not mentioned in the records (Marion Grinstead, personal communication 1991), this architectural feature could have served as a place for soldiers to sit, or it could have been added by later occupants of the fort after abandonment by the military.

The floor of this room is represented by patches of jaspe measuring 2.5 to 3 inches thick. In areas without an intact layer of jaspe, the floor consists of a hard-packed level surface covered with friable jaspe fragments. There was no evidence that this room ever had a wood floor. No artifacts were found on the floor or in subfloor tests. Most of the artifacts recovered from the fill of this room were shards of window glass, although a red clay pipe with a molded face was found in the wall fall.

Excavations along the front porch exposed in situ floor joists (two-by-fours) running parallel to the front of the building (Figure 5.5). A single row of joists is flush with the base of the exterior wall, and the remainder are spaced ca. 2 feet apart and extend out about 8 feet from the wall. Several floorboards still overlie the joists. Numerous glass fragments were found under the boards and between the joists. Wood shingles found above the floor joists indicate the porch had a shingled roof.



Figure 5.5.
Excavations on the front porch showing floor joists in the soldiers' quarters.

A chimney excavated along the north wall near the center of the room was constructed of adobe bricks and measured 1 m wide by 2.60 m long by 41 cm high. The back wall of the chimney was incorporated into the northern wall of the room. The center opening measured ca. 50 cm wide by 1.5 m long. Three tabular rocks were found in the adobe bricks and may have aided in the circulation of air. The front of the chimney extended about 50 cm into the room and was covered with mud coping and layers of plaster. No formal hearth was evident. The interior of the chimney was filled with ash, pieces of bottle glass, and melted metal fragments. The lack of an associated fireplace probably means the room was heated by a stove.

The matrix within this room consisted of four basic stratigraphic levels. Stratum 1 represented the 4–6 cm of loose eolian sands covering the site. This stratum was underlain by Stratum 2, a 30- to 45-cm-thick lens of a mixture of melted adobe, plaster, and gravels suggesting both roof and wall fall. Stratum 3 represented the floor and Stratum 4 consisted of the silty sands and gravels under the floor. The majority of the artifacts recovered during the excavations within this room were found within Stratum 2. A concentration of bricks was present along the western wall, but their origin and function are not known. No formal feature was associated with them.

ROOM 5 (SU 6)

Room 5, located three rooms to the south of Room 1 along the western row of rooms, is the only room that was completely excavated. This room measures roughly 6.5 by 6 m (21 by 20 feet) and originally had walls 12 feet high (Figure 5.6). The surviving walls are between 2 and 3 feet high and 19 inches wide (Figure 5.7). The walls have up to one-half inch of mud coping covered with numerous layers of white plaster. At least three plastering episodes are evident along the southern wall. No foundation was encountered.

The room had a raised board floor but most of the materials had been scavenged, probably after the fort was closed. The couple of remaining floor joists are milled two-by-fours resting on a fairly compacted surface. The few floorboards still attached to the joists are tongue and groove.

An interior doorway connecting with the room to the north was revealed in the northeast corner. This doorway measures approximately 1 m wide and exhibits rounded plastered corners. No doorjamb was evident, but this wood may also have been scavenged. Although no exterior doorway was found, a low, eroded area along the eastern wall with no plaster may indicate the location of an outer door that would have opened onto the placita (Figure 5.8).

Because the walls were eroded to a level below the windowsills, the number and location of windows within this room is not known. A heavy concentration of glass was found in the northwest corner, which suggests that a window was probably present in this corner.

The matrix within this room was very similar to that in Room 1. Stratum 1 consisted of thin layers of colluvial silts and sands ranging between 10 and 15 cm thick. Stratum 2 was composed of 8–30 cm of gravels ranging from pea-sized to 7–8 cm in diameter, small chunks of adobe, pieces of jaspe, and bits of wood, which appear to have come from the ceiling or roof. In many grids, fragments of wall plaster were found at the interface between Strata 1 and 2. Stratum 3 represented the floor surface and was not easily discernible except along the walls where the plaster lipped up. Stratum 4 consisted of a homogeneous, silty clay containing small gravels and multiple layers of adobe melt/wash.

The exact function of this room is not known, but it may have been either a mess room or a storeroom. Artifacts, which were recovered from all strata, are primarily bottle glass, nails, some bone, and fragments of window glass. Some buttons, bullets, and a Hardee hat pin were also recovered. No artifacts were found on the floor, but numerous items were recovered from below the floorboards. These artifacts include a small cache of .45-70 shells, a brass key, several Minie balls, can fragments, bullets, the base to a ceramic pitcher, nails, a horseshoe, and a carbine sling buckle. These items were piece-plotted and their location is shown on the floor map of the room (Figure 5.6).

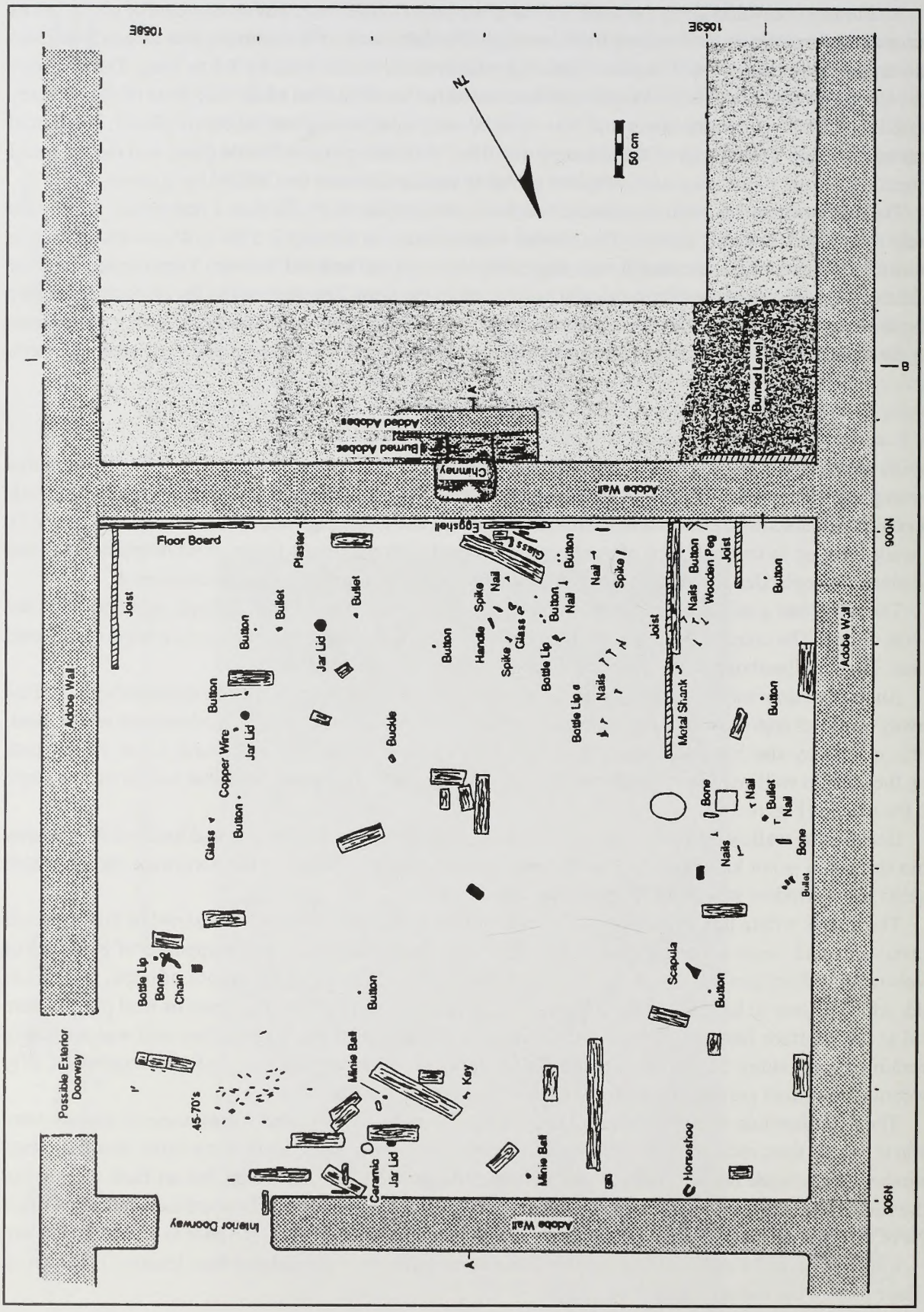


Figure 5.6. Plan of Room 5 and the north half of Room 6 in the soldiers' quarters.

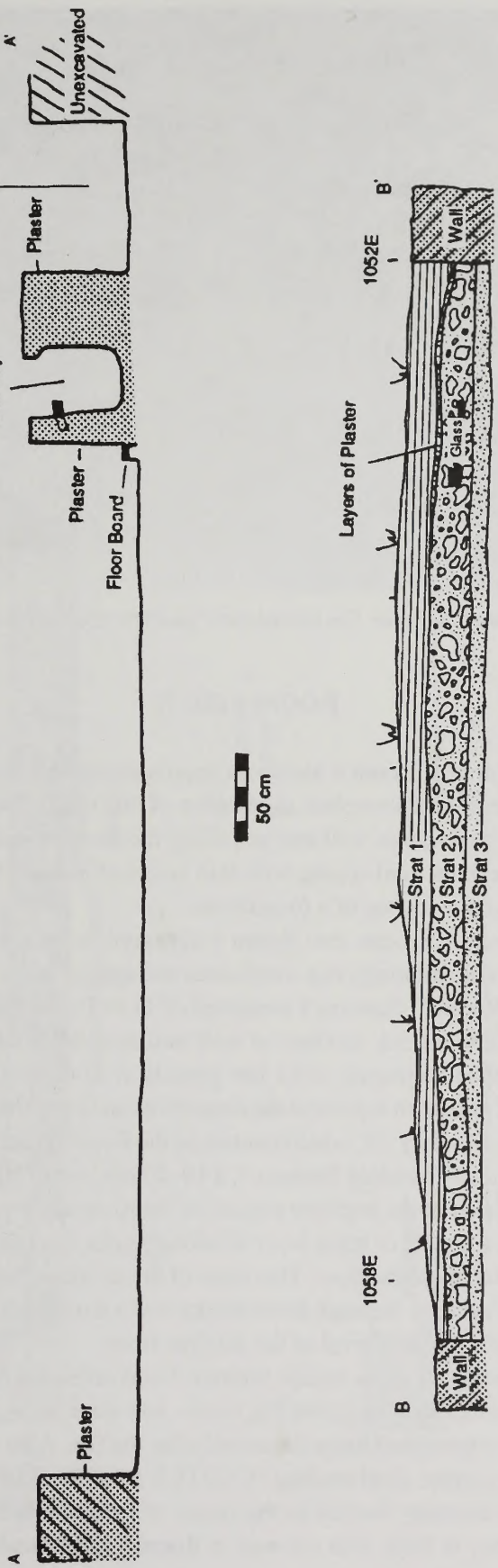


Figure 5.7. Profile and cross-section of Room 5 in the soldiers' quarters.

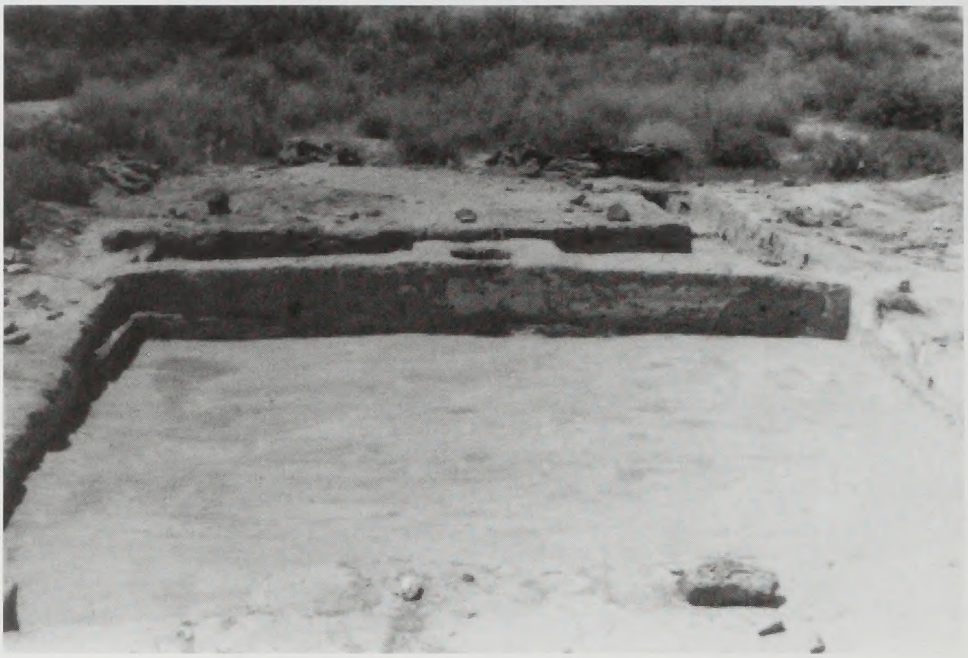


Figure 5.8. *Room 5 in the soldiers' quarters after excavation.*

ROOM 6 (SU 7)

Located just to the south of Room 5, Room 6 measures approximately 6.5 by 6.5 m (ca. 21 by 21 feet). As with Room 1, time did not permit the complete excavation of this room. Two trenches were excavated to below floor level, one along the northern wall and one along the western wall. The exposed walls range in height from 25 to 40 cm and exhibit mud coping with thin layers of plaster. The southern wall of this room has eroded away, and there is no evidence of a foundation.

The profiles of the trenches indicate that Room 6 appeared to have a complex remodeling history, including one episode of burning, although this event does not appear in the records (Figure 5.9). Strata 1 and 2 are similar to those of Room 5. Stratum 1 consisted of 1- to 15-cm-thick colluvial lenses of silt and clay. Stratum 2 was a 5- to 25-cm-thick mixture of wall and roof fall containing large chunks of jaspe, occasional pieces of wood, adobe fragments, and a few gravels. A floor joist and lipped plaster were found at the base of this stratum and appear to represent the remains of an upper floor. This stratum was underlain by Stratum 3, a 7–12 cm layer of sandy fill, which contained the floor contact and subfloor materials for the uppermost floor. Stratum 3 directly overlaid Stratum 4, a 10–20 cm lens of burned adobe, burned jaspe, and charcoal. This stratum was thicker in the northern portion of the room and pinched out near the center of the room. In rebuilding the room, a double or triple layer of adobe bricks was laid in the northern half, probably to facilitate rebuilding and to level out the floor. This layer of bricks, designated Stratum 2A, appeared to be resting near the original floor surface. Beneath these bricks was a dark lens of silty clay termed Stratum 5, which probably represented the subfloor level of the original floor.

Artifacts were recovered in all strata except Stratum 1 and consisted primarily of bottle glass, metal fragments, window glass, a leather strap and shoe fragments, and some bone. The majority of artifacts came from Stratum 3 and probably represented items deposited after the fire. Also recovered from Stratum 2 was a small, complete bottle with a paper label reading "CARTER'S LITTLE LIVER PILLS".

Rooms 5 and 6 share a chimney located in the center of their conjoining wall and measuring 1.5 m long by 1 m wide. The chimney is flush with the wall in Room 5 but extends ca. 50 cm into Room 6. The

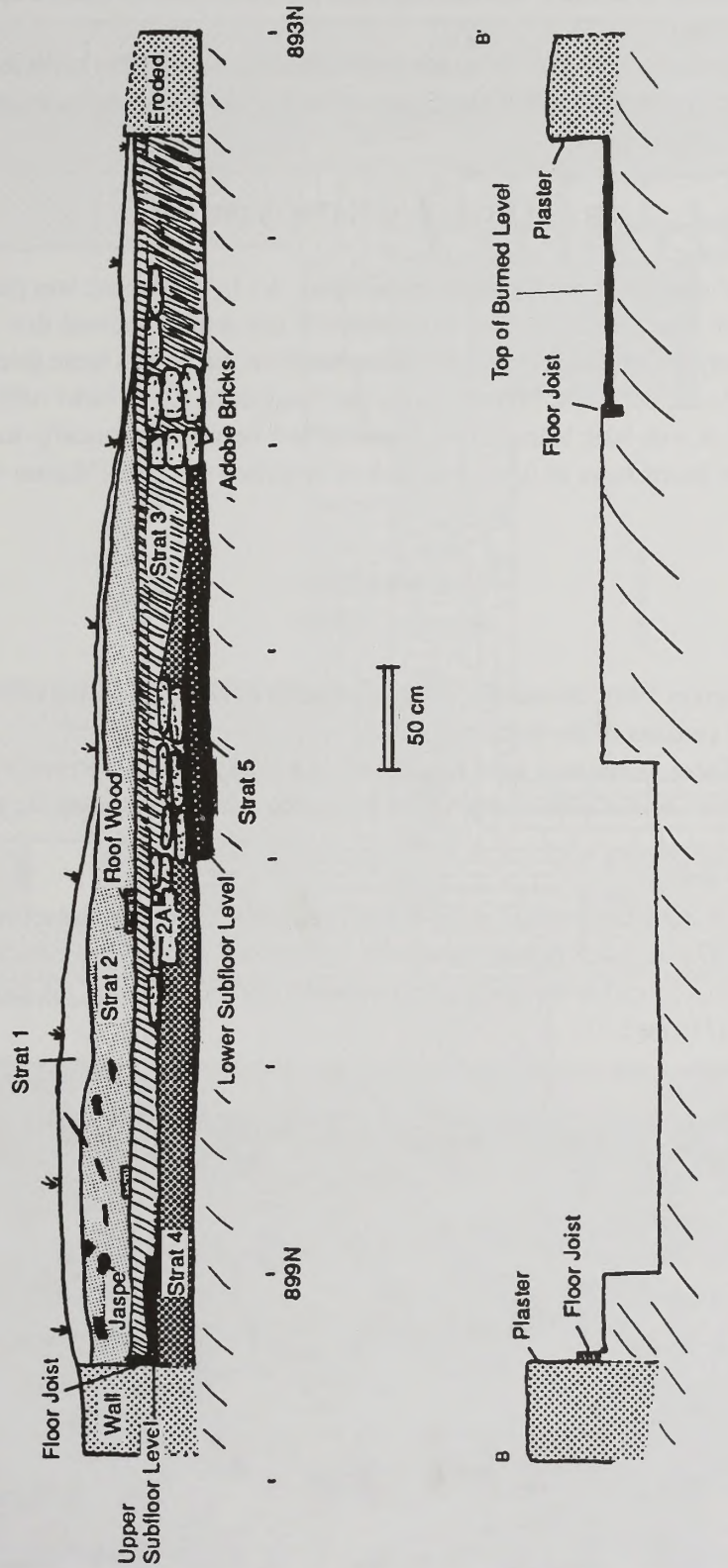


Figure 5.9. Profile and cross-section of Room 6 in the soldiers' quarters.

portion of the chimney in Room 6 apparently underwent some remodeling, since a new layer of adobe bricks is evident. The flue measures 50 by 30 cm and was filled with ash, several bottle lips, and a kaolin pipe bowl and stem. As with the chimney in Room 1, this chimney also has a built-in slab located approximately 35 cm above the bottom of the flue.

The types of artifacts recovered and the burning episode suggests that this room may have functioned as a kitchen at one time, especially when Room 5 served as a mess room. Not enough of the room was excavated to ascertain other functions.

TRASH CONCENTRATION (SU 9)

To the rear of the soldiers' quarters is an extensive trash scatter. A 1 by 2 m trench was placed in a dense area of this scatter to look for intact deposits. The excavation of this trench showed this scatter to be fairly churned and approximately 30 cm deep. Artifacts recovered from this trench were primarily fragments of bottle glass followed by bone, ceramics, buttons, nails, can fragments, a pipe bowl with the stem base, and a leather strap fragment. It was later learned that this area had been systematically trenched by vandals, which would account for the mixture of items and lack of stratified deposits (Marion Grinstead, personal communication 1991).

THE BAKERY

Jeanne A. Schutt

The final room investigated in 1991, the bakery, is the last room on the eastern wing of the western soldiers' quarters (Figure 5.10). It consists of the brick and cobble support for the oven (SU 11) and two rooms that were built sequentially. These rooms may have functioned as a work room (SU 8) and a storeroom (SU 10). The oven was built of adobe bricks in the early 1880s to replace a smaller, inadequate adobe oven.

Work Room (SU 8)

This large room, located in the southern half of the bakery, probably represents the actual baking room. The room is rectangular and measures 4.8 m north-south by 6.06 m east-west. Time constraints precluded the complete excavation of this room, so the work effort concentrated on exposing the exterior walls and the area in front of the oven (Figure 5.11)



Figure 5.10. *The bakery before excavation.*

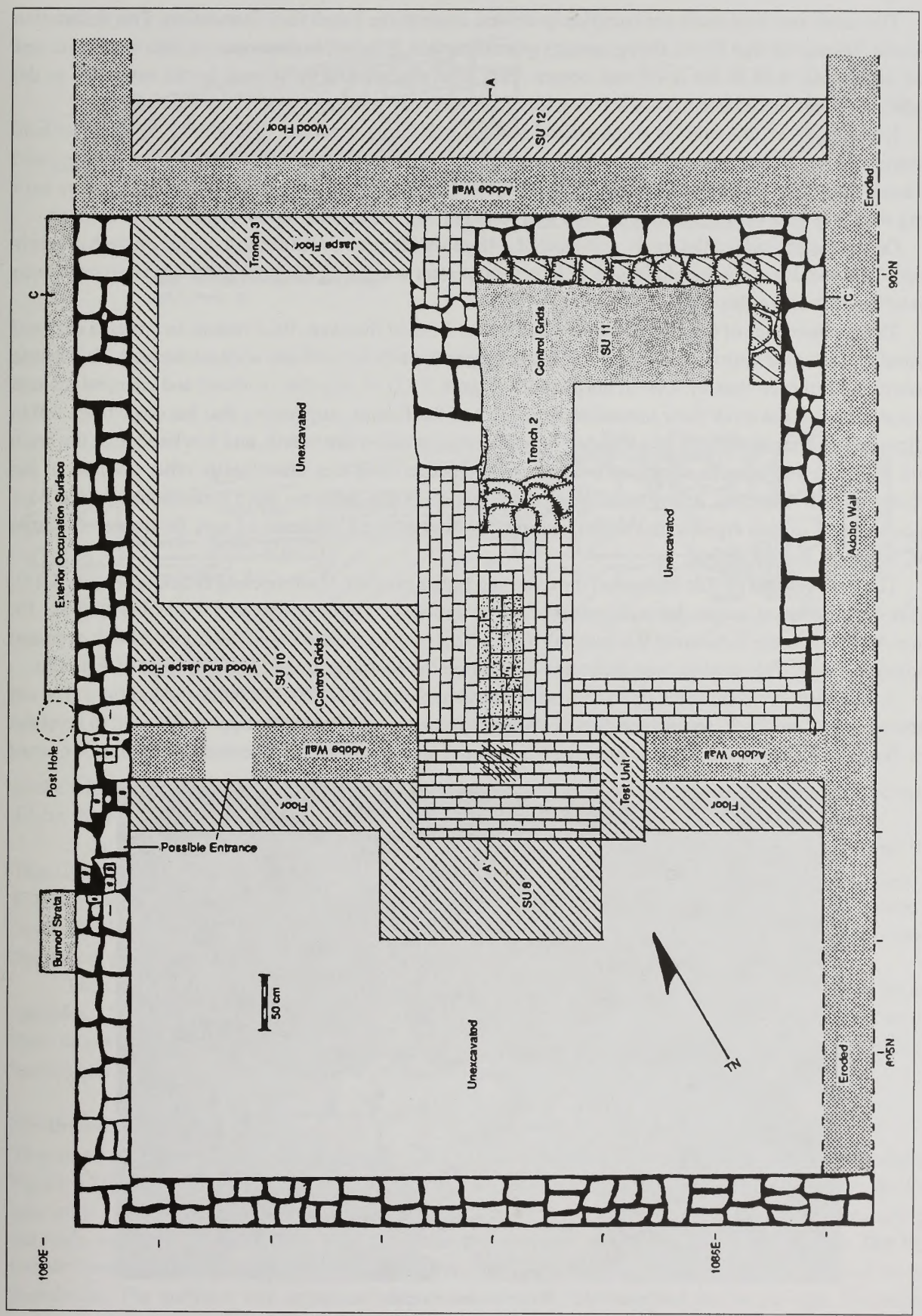


Figure 5.11. Plan of the excavations within the bakery.

The south and west walls are completely eroded down to the basalt rock foundation. This foundation measures 50 cm wide and 26 cm above modern ground surface. A possible door opening into the placita was found in the west wall in the northwest corner. This area was marked by several bricks cemented to the foundation. These bricks encompass a 1-m-wide space and may represent part of the threshold.

Just outside of this door is a compacted surface exhibiting evidence of burning. A large posthole measuring 28 cm in diameter and 44 cm deep was present on the north side of the surface. The fill consisted of a loose matrix of decomposed wood. This posthole may have been part of the picket-post rooms built during the Civil War. A second circular area was found on the south side, but no posthole was evident.

On the eastern side of the room, remnants of a 48-cm-wide adobe wall are still visible, though severely eroded. This wall ranges in height from 6 to 15 cm; no plaster is evident, nor does there appear to have been an exterior door along this side.

The northern part of this room is dominated by the front of the oven. Excavations in this area exposed a centrally positioned, mortared brick hearth flanked on either side by a 48-cm-wide adobe wall. This hearth measures 1.62 m east-west by 1.00 m north-south (Figure 5.12). A circular, oxidized and charcoal-stained area was noted on the brick floor immediately in front of the firebox, suggesting that hot coals often fell to the floor in this area. Remnants of a wooden floor are present below the hearth, and it is likely that the brick hearth was added to prevent a fire. No evidence of a wooden floor was identified in other portions of the southern room. It is unclear, owing to the limited excavation, if this indicates that a continuous wooden floor was not present or that erosion and/or scavenging has destroyed all evidence of one. Evidence of a jaspe floor, however, was identified.

The stratigraphic profile in front of the oven suggests a number of remodeling episodes (Figure 5.13). Twelve centimeters of eolian deposits occurred above a rubble stratum similar to that identified in SU 10. Concentrated brick rubble occurred in a loose silt matrix. This rubble represents wall fall from the brick oven and its adjoining wall. This stratum was deposited directly on the mortared brick hearth in front of the oven.

A thin layer of silt occurred below the brick hearth and was deposited on a burned wood floor. The silt measured only 2 cm thick, and it is unclear if it represents a period of abandonment or fill used to level the brick floor. The burned wood floor measured between 3 and 6 cm thick. A stratum of oxidized, burned



Figure 5.12. *The brick hearth after excavation.*

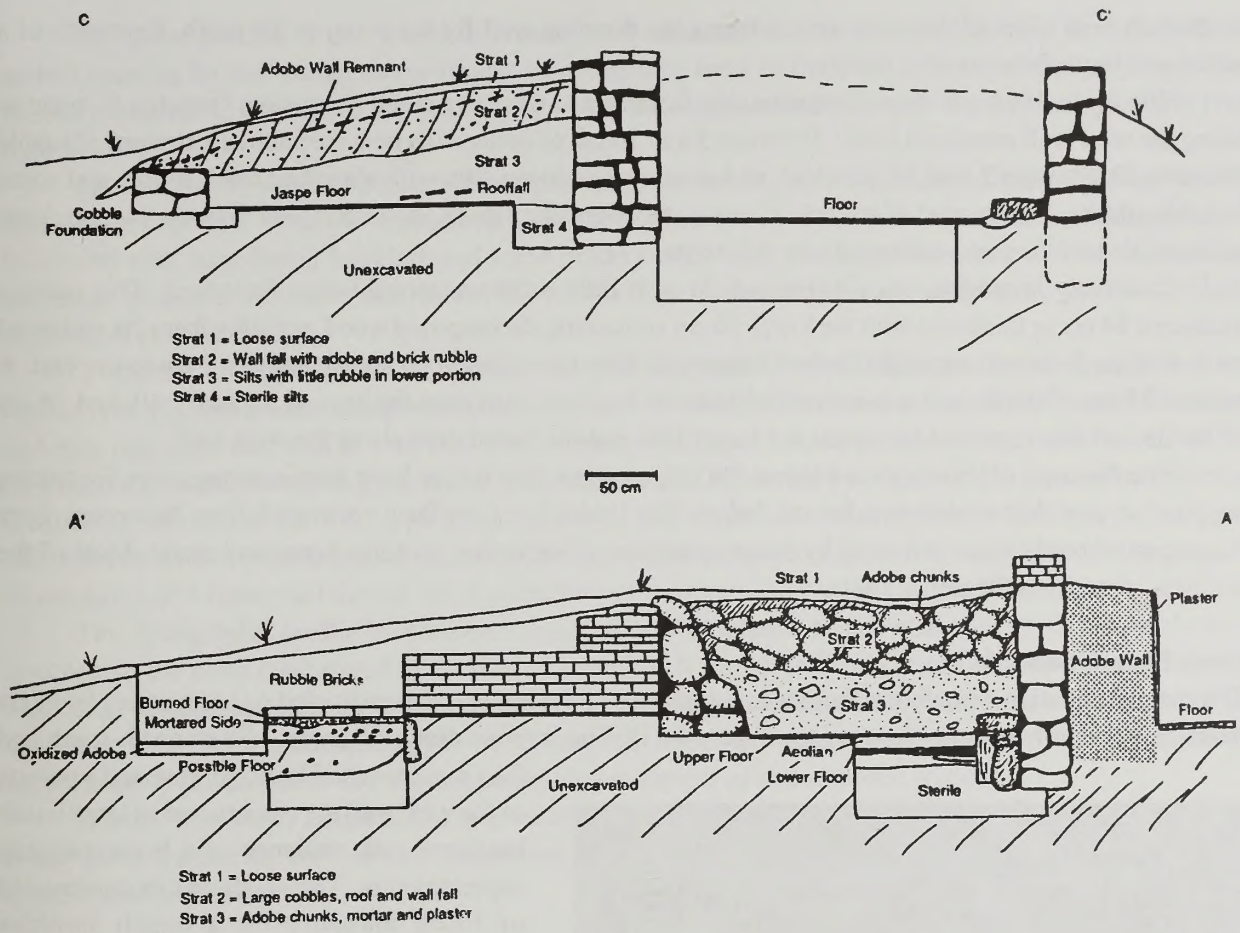


Figure 5.13. *Profile and cross-section of the bakery.*

adobe with decomposed mortar and ash was identified below the wooden floor and measured approximately 10 cm thick.

A compact surface was defined at the base of this stratum. It is unclear if this represents a third floor. This stratum rested on a very compact, oxidized adobe layer containing limited burned brick fragments. The burned adobe stratum was 23 cm thick and lay on sterile soil excavated to a depth of 21 cm. The burned and oxidized adobe in these lower two strata may represent remnants of an earlier adobe oven that was used in the bakery prior to construction of the brick oven.

Thus, the stratigraphic profile in this portion of the bakery suggests a number of sequential building episodes. Clearly the brick platform in front of the oven was added to prevent a fire. The burned wooden floor below suggests that coals from the oven had set the floor on fire. The wooden floor was built over burned and oxidized adobe that may have been present prior to the construction of the brick oven.

Northwest Room (SU 10)

This small room is rectangular with interior dimensions of 4.00 m north-south and 2.50 m east-west (see Figure 5.11). It is separated from the main room by an adobe wall measuring approximately 48 cm thick and now only 5 cm high. Some plastering is evident on both sides of the wall, except for an area measuring 38 cm wide just west of center. This may represent an entryway, although it seems too narrow. The basalt cobble foundation continues on the western side, and the eastern wall is formed by the west side of the oven foundation. The northern wall is also of adobe, measuring 50 cm thick and 40–84 cm high. Plastering is

evident on both sides of this wall, which forms the dividing wall for the room to the north. Remnants of a wood and jaspe floor are still visible.

The fill in this room sloped considerably from east to west as a result of erosion. Only the foundation along the west wall remained intact. Between 5 and 10 cm of eolian silts occurred above a stratum of rubble (Stratum 2). Stratum 2 was 48 cm thick and consisted of loose silts with abundant brick rubble and some basalt boulders. The amount of brick was considerably greater than in SU 11 and may indicate that the upper brick portion of the oven collapsed into this room.

Relatively homogeneous silt (Stratum 3) with little rubble occurred below Stratum 2. This stratum measured 34 cm in thickness with the lower 10 cm containing decomposed wood, possibly from the collapsed roof. A jaspe floor was identified below Stratum 3. This floor sloped up approximately 2 cm to the east. A total of 35 cm of sterile soil was excavated beneath the floor to expose the base of the east wall, and 18 cm of sterile soil was removed to expose the base of the cobble foundation along the west wall.

The function of this room is unclear. Its size suggests that it may have been a storage area for baking supplies or possibly a bedroom for the baker. The majority of artifacts recovered from this room were fragments of bottle glass followed by lesser quantities of ceramics, buttons, bone, and metal. Most of the artifacts came from the upper strata.

Oven Foundation (SU 11)

The oven foundation, situated in the northeast quarter of the bakery, is constructed of large basalt boulders overlain by red/orange clay bricks (see Figure 5.11). The interior dimensions are 3.88 m north-south and 2.63 m east-west. The north, east, and a portion of the west wall are constructed of large basalt boulders with evidence of a brick masonry superstructure. The south wall is constructed of brick masonry on a basalt boulder foundation, with the front of the oven opening into the main, southern room (Figure 5.14).



Figure 5.14. *Oven foundation and firebox after excavation.*

All but the west wall in the room abutted exterior adobe walls. The west wall measures 62 cm wide by 1.34 high and is constructed of mortared basalt boulders overlain by a brick superstructure. The north wall is also constructed of large basalt boulders with limited evidence of brick uppers. The cobble wall measures 38 cm wide and stands 1.62 m high. A 50-cm-wide adobe wall, which forms the south wall of the adjacent room, is on the other side of this wall. The eastern wall of the foundation measures about 37 cm wide by 1.64 m high. No evidence of the brick superstructure remains intact.

The south wall is constructed of bricks, which interlock in the southeast corner with the basalt boulders of the east wall. This wall measures 44 cm wide and 88 cm high and represents the front of the oven.

The lower portion of the firebox is present, and remnants of curved metal that may have formed an arched opening for the baking compartment were found in front of the oven above the brick platform. The firebox measures 41 cm across and 1.22 m deep with the base situated 84 cm above the brick platform (see Figure 5.14).

The interior fill was composed of three general strata (see Figure 5.13). Approximately 5 cm of eolian silt occurred above a thick (48 cm) stratum of rubble (Stratum 2). This rubble stratum was composed of loose silts with large basalt boulders and some bricks mixed with charcoal. The concentration of boulders was much greater in this study unit than in SU 10. The high concentrations of boulders and smaller numbers of bricks is problematic.

A stratum of large chunks of burned adobe/terrone and charcoal (Stratum 3) occurred below the rubble. Ash was also present along with a small amount of cobbles. This stratum measured 41 cm in thickness and may represent roof and/or wall fall. This stratum was deposited on a remnant layer of cement, which may derive from the mortar in the boulder foundation walls. Separated by silt, a second layer of cement was identified 9 cm below the first. Upwards of 5 cm of additional silt occurred below this layer, which was underlain by an 8-cm-thick lens of organic material consisting of decomposed wood. This wood appears to be remnants of a form used during the construction of the oven. Below this lay sterile soil.

The stratigraphic profile in this area suggests that a foundation trench was excavated into sterile soils to construct the north cobble wall of the oven foundation. It further indicates that a cobble and cement ledge was constructed against the north and east walls by building a wooden form to hold the materials in place until the cement dried. Remnants of the wood form still remained underneath the ledge. The ledge extended approximately 20 cm below the stratum containing remnants of decomposed wood.

A small number of artifacts was recovered from the upper levels of the mixed fill. The majority were bottle glass fragments, with several fragments of indeterminate metal, buttons, bone, and a small brass thimble also recovered. ✠

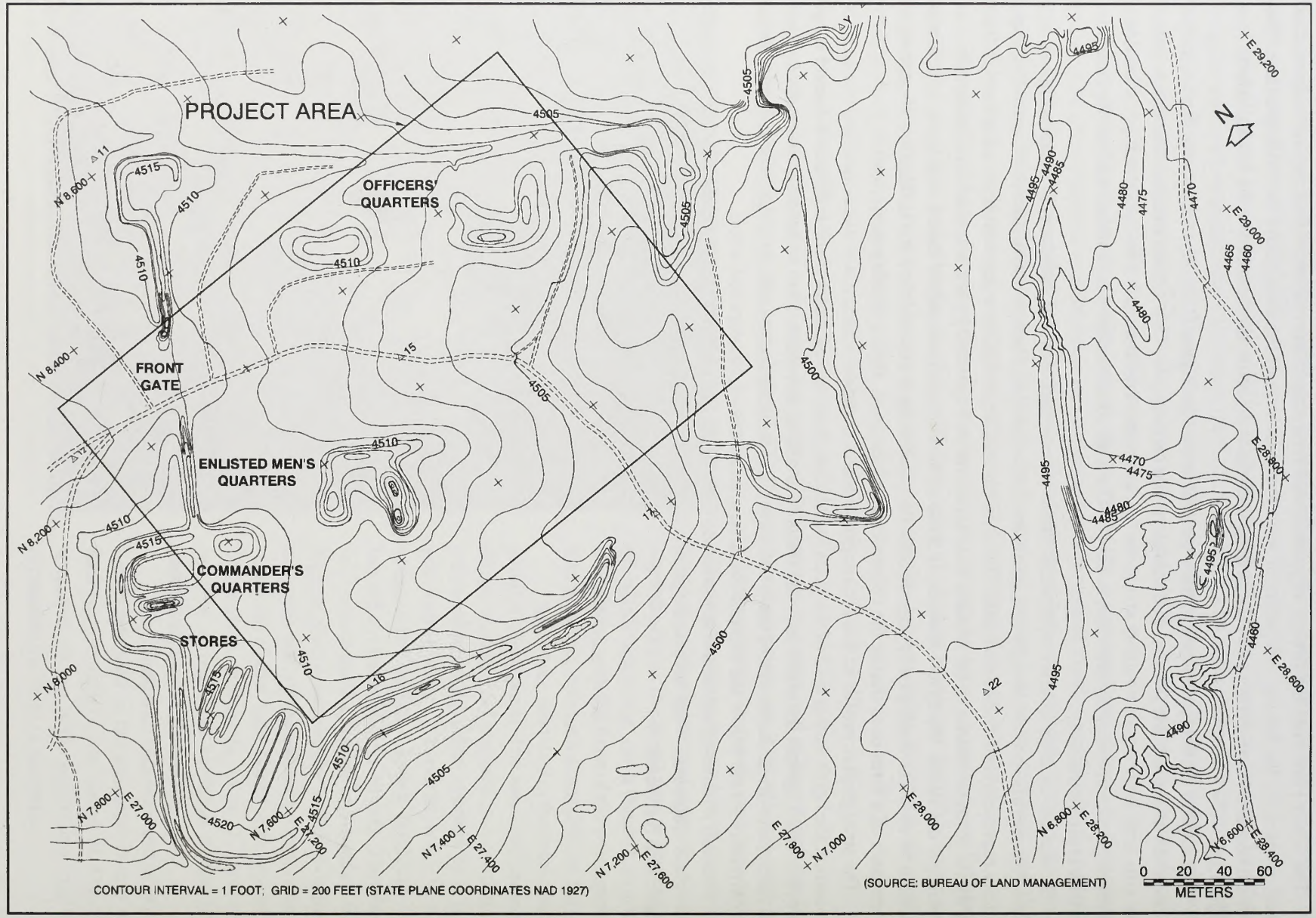


Figure 6.1. *Topographical map of Fort Craig showing the officers' quarters and their relationship to the front gate and the soldiers' quarters.*

Chapter 6

THE OFFICERS' QUARTERS



THE 1992 SEASON CENTERED AROUND FIVE ROOMS within the western ell of the eastern set of officers' quarters (Figures 6.1 and 6.2). Also investigated was a small unit abutting the north side of the foundation in Room 5 and a 1.5-m-wide exploratory trench in Room 6 located to the east of Room 1. The room numbers were arbitrarily assigned on the basis of their location from south to north beginning at the front of the building.

ROOM 1 (SU 13)

Room 1 is the large room located in the southwestern corner of the ell. This room was one of two that was completely excavated to below the floor. Room 1 measures 6 by 6 m (20 by 20 ft) and has two doorways measuring about 1 m wide—one in the southeastern corner of the eastern wall and one in the northeast corner of the northern wall. The wall along the interior of the southeastern doorway is inset, probably to accommodate a wooden threshold. This doorway opens onto the central room (Room 6) along the front. The northeastern doorway, which opens onto Room 2, is not inset and exhibits a four-brick adobe threshold. The southern half of a double fireplace is located in the center of the northern wall (Figure 6.3).

The walls in this room are constructed of adobe bricks measuring 19 by 8 by 4 inches and range in height from 10 to 25.6 inches on the east and north. Much of the western and southern walls are either severely eroded or completely gone. Approximately one-quarter inch of mud coping covered by several layers of white plaster is present on most of the intact interior walls. At least six plastering episodes are evident on the east wall. A 1- by 6-inch blue-gray baseboard is still attached in the northeast corner of the room. Several other one-by-six blue boards were found at the base of Stratum 4 and probably represent baseboards as well. There was no evidence of a cobble foundation.

Because upwards of 10 feet of wall was gone, no evidence of window sills remained. Photographs of the front of the officers quarters taken in 1867 and 1890 show four windows across the front and one on the side of the corner front room. Thus at least two windows had been in this room. A dense concentration of glass found in the north-central portion of the room suggests that the front wall of this room probably fell inward.

Wooden floors were put in the quarters sometime in 1882, but only remnants of two floor joists (two-by-fours) were found along the eastern and northern walls. Remnants of half-lapped, 1- by 4-inch floorboards

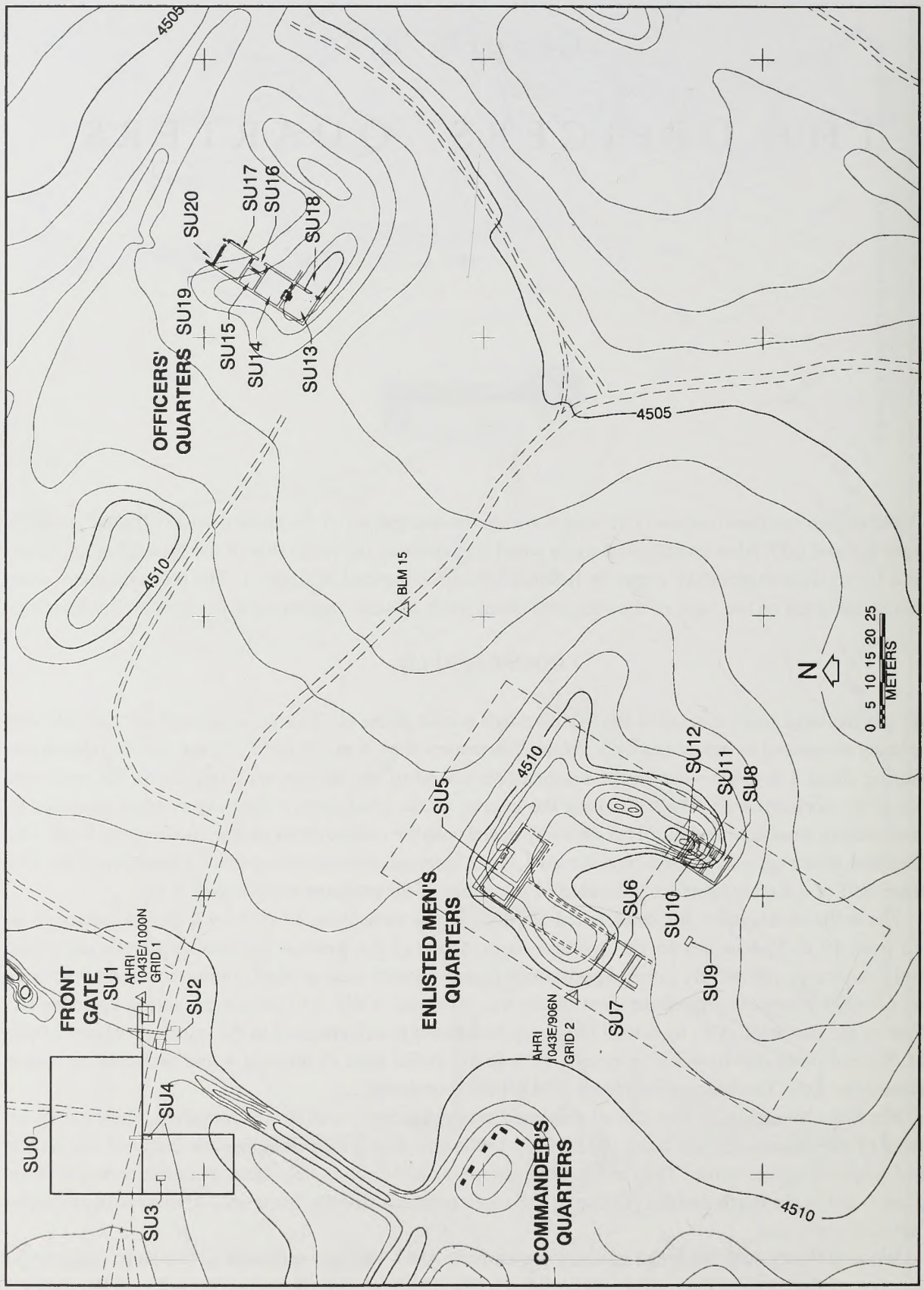


Figure 6.2. Location of data recovery units for the 1992 season and their relationship to the work effort in the 1990 and 1991 sessions.

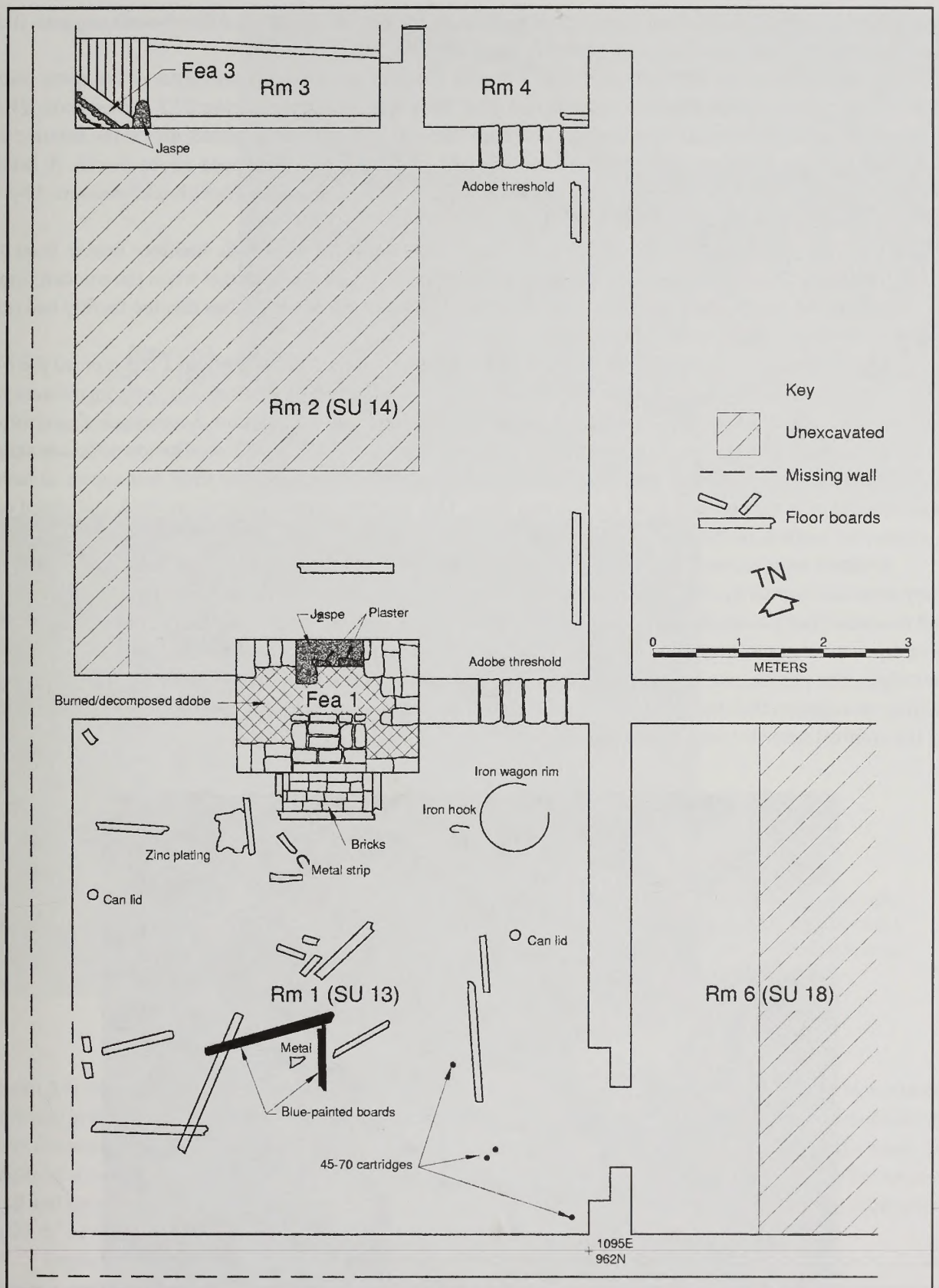


Figure 6.3. *Plan of Rooms 1, 2, and 6 in the officers' quarters.*

were found strewn about the floor at the top of Stratum 4. The dearth of joists and floorboards suggests that most of these building materials were probably taken after the fort was closed.

As noted above, the southern portion of a double fireplace is situated in the center of the north wall. Designated Feature 1, this fireplace consists of adobe brick wing-walls measuring 27.5 inches wide, 21.6 inches high, and extending 27.5 inches into the room. Several layers of white plaster are on the exterior of these walls. The interior of the fireplace consists of fire-reddened and blackened adobe bricks. A brick hearth measuring 39 by 19.7 inches is at the front of the fireplace (Figure 6.4). These bricks measure 8 by 4 by 2⁹⁄₁₆ inches; none had manufacturers' marks.

Remnants of wooden floorboards are present on all three sides of the hearth. Subfloor tests in front of the hearth showed it to be underlain by adobe bricks (Figure 6.5). This suggests that when the wooden floor was installed, the hearth was raised above the flooring. The intact fireplace implies that the facility had not been converted to accommodate a stove.

The matrix within this room consisted of four basic stratigraphic units. Stratum 1 represented the 4–6 cm of loose eolian sands covering the site. This stratum was underlain by Stratum 2, a 5–40 cm mixture of melted adobe, plaster, and some gravels, suggesting both roof and wall fall. Stratum 3 consisted of a uniform layer of decomposed jaspe, gravels, and melted adobe averaging about 20 cm thick. The top of this stratum would have been at floor level. Stratum 4 represented a layer of siltier sands and trash that appear to have been brought in to support and level the wooden floor. This layer averaged about 10 cm thick and rested on a compacted surface, probably the original jaspe floor.

Artifacts were recovered from all four stratigraphic units, but the majority came from Strata 3 and 4. They consisted primarily of window glass, can fragments, nails, some bottle glass, corrugated roofing tin, and miscellaneous pieces of metal. In addition, an 1881 penny, several ceramic cup fragments, and a carbine sling tip were also recovered. At the base of Stratum 4, a metal wagon wheel rim, several .45-70 caliber cartridges, zinc plating, two U-shaped pieces of iron, and two can lids were found (Figure 6.6). The corrugated roofing tin suggests that this set of quarters did indeed have a tin roof, probably installed in 1882 as implied by the archival records (see Chapter 11).



Figures 6.4. *Brick hearth in front of the fireplace in Room 1 of the officers' quarters.*



Figure 6.5.
Layer of adobe bricks under the hearth in Room 1 of the officers' quarters.



Figure 6.6.
Room 1 of the officers' quarters after excavation; note metal rim in northeast corner.

ROOM 2 (SU 14)

Room 2 is the 20- by 20-foot room immediately to the north of Room 1. Entry to this room is by a shared doorway in the southeast corner. Time did not permit the complete excavation of this room, so the excavations were centered primarily around the north side of the double fireplace in the southern portion of the room. In addition, a 2-m-wide trench was excavated along the eastern third of the room in order to expose the eastern wall and the doorway into the next room to the north (see Figure 6.3). This strategy resulted in the excavation of 20 m^2 or 55% of the room.

Exposure of the walls in this room showed them to be constructed of the same size adobe bricks as Room 1, and they ranged in height between 12 and 37 inches. Remnants of a thin veneer of mud coping covered by upwards of six layers of white plaster were noted on the eastern wall. No baseboards or joists

were attached to the excavated walls, but three floorboards were found in place at the base of Stratum 3. The doorway in the northeastern corner measures 39 inches wide and has a four-brick adobe threshold. No framing elements remain.

The north side of the double fireplace mirrors the south side in its construction. The wing-walls, however, are recessed only 12 inches and there is no brick hearth. A thick layer of jaspe is present within the firebox, suggesting that this side of the fireplace had been remodeled to accommodate a stove. The lack of a hearth and the shallow firebox support this inference.

The matrix within this room was the same as in Room 1. Artifacts were recovered from all four stratigraphic units, with the majority coming from Stratum 3. The artifacts consisted primarily of window glass and miscellaneous pieces of metal. One interesting item recovered from Stratum 3 in the western corner of the wall and fireplace was a whole tonic bottle with its cork stopper still in place.

ROOM 3 (SU 15)

Room 3, located on the west side of the ell just north of Room 2, is a small room measuring ca. 11.5 by 11.5 feet (Figure 6.7). This room was completely excavated and represents the best preserved of the investigated rooms. The walls range from 18 to 24 inches high and exhibit at least three episodes of plastering underlain by a quarter inch of mud coping. Along the southern wall, a blue baseboard was still attached to the wall below the plaster.

Entrance to this room is through a 39-inch-wide door in the center of the eastern wall. The interior portion of the wall is recessed about 16 inches on either side, mirroring the doorway in the southeastern corner of Room 1. Both an adobe brick threshold and a wooden threshold are present; the wooden threshold is on the interior side of the room and inset into the recessed wall. No other framing elements are present.

Removal of the upper fill revealed five east-west running floor joists still in place. These joists were two-by-fours set on 25-inch centers and resting on a use-compacted surface. The northernmost joist was not flush with the wall; rather a floorboard appears to have been set into the wall. Vertical tongue-and-groove floorboards were found on four of the five joists, which suggests they may have been part of a subfloor and not the actual floor.

A small hearth was exposed in the southwestern corner of the room. Designated Feature 3, this hearth consists of an upright slab of jaspe diagonally placed between the two walls. This slab measures 23.6 inches long, 12 inches wide, and 4 inches thick and is held in place by a 2- to 3-inch-thick layer of plaster that extends approximately 12 inches along the walls on either side of the slab (Figure 6.8). A plastered floor in front of the slab ties into the plaster on the walls and is finished off in an arc across the front. Some burning was evident behind the slab and on the plastered walls. This feature does not appear to be of military origin and was probably built by later occupants after the fort was abandoned.

Below the plastered floor of the hearth was a raised-board platform measuring 33.5 inches wide and 33.5 inches long. The boards are cut at an angle across the back and abut a cement-like surface, which fits into the corner (see Figure 6.8). The boards are painted a blue-gray and exhibit burn marks. This platform is underlain by adobe bricks, raising it about four inches above the floor. The placement of the platform in the corner and the burn marks suggest that this feature probably accommodated a corner woodstove. Unlike the plastered feature built on top of this platform, the relationship of this feature to the wooden floor indicates that it probably was constructed during the military occupation of the fort.

The matrix within this room also consisted of four basic stratigraphic levels, but not entirely similar to those found in the preceding two rooms. Stratum 1 is the 4–6 cm of loose eolian sands and silts which cover the site. This stratum is underlain by Stratum 2, a mixture of melted adobe, plaster, and gravels averaging 25 to 40 cm thick. Stratum 3 represents the floor, while Stratum 4 consists of the silty sands and gravels found

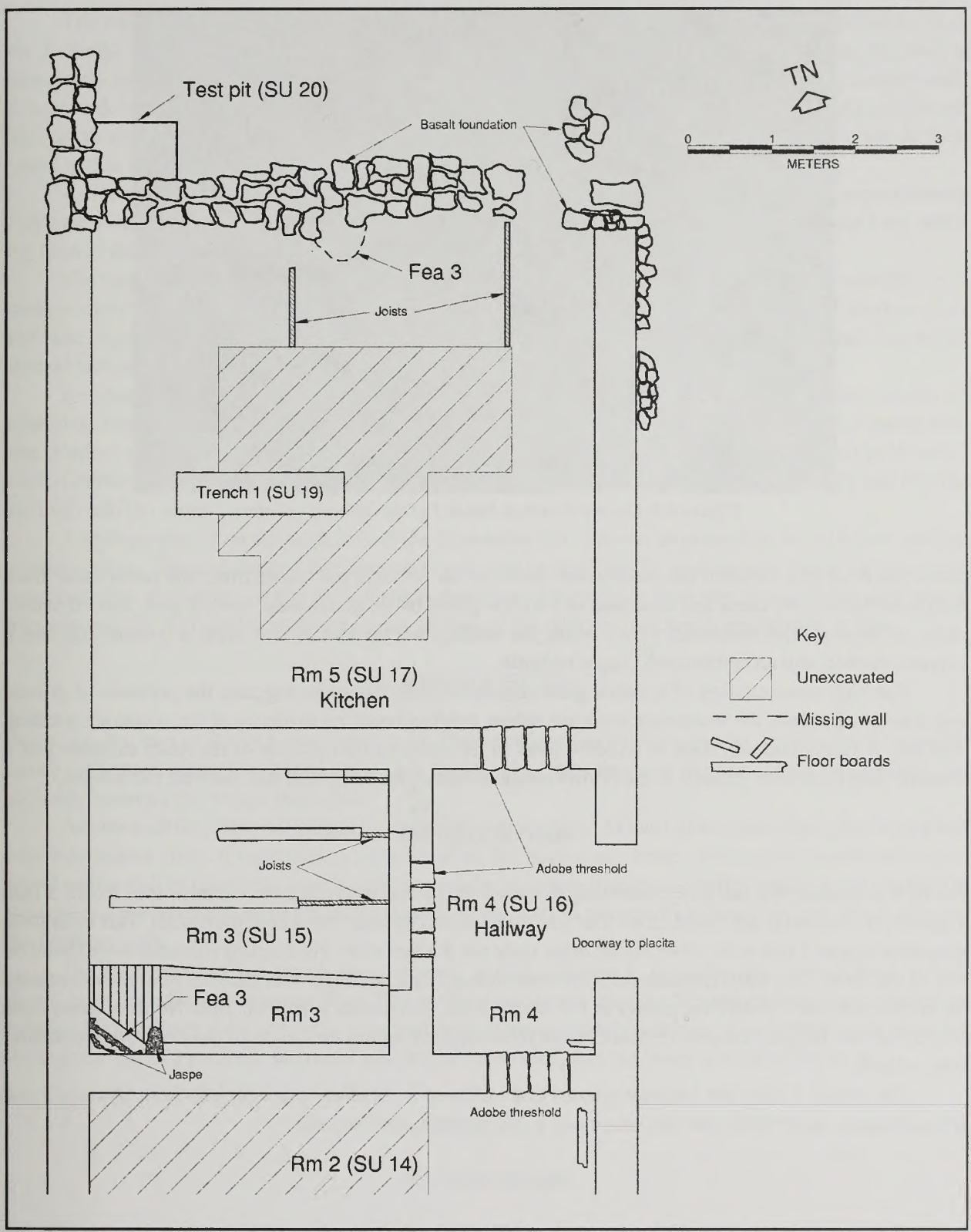


Figure 6.7. *Plan of Rooms 3, 4, and 5 in the officers' quarters.*

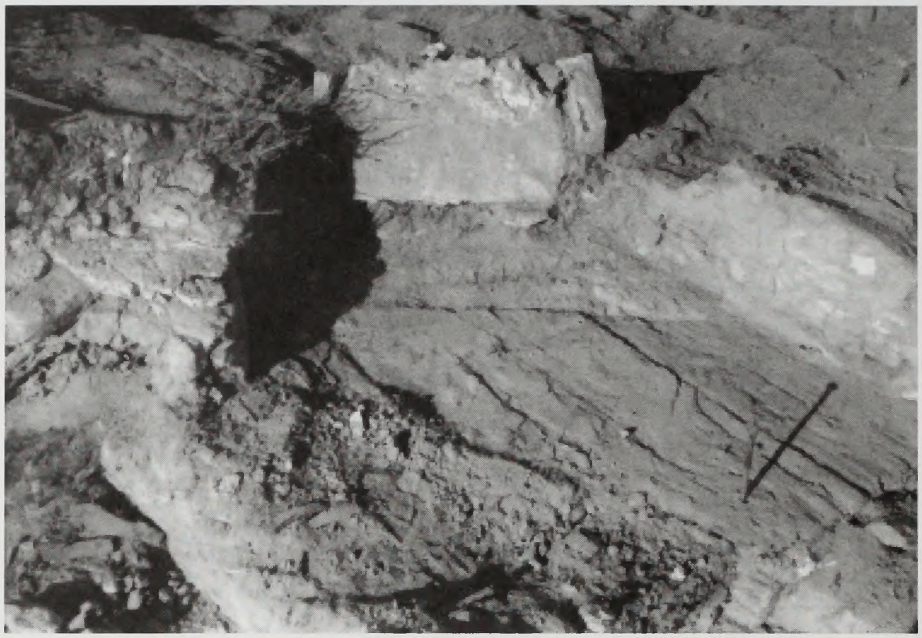


Figure 6.8. *Corner hearth in Room 3 of the officers' quarters.*

under the floor and between the floor joists. Most of the artifacts recovered from this room came from within the lower two strata and consisted of window glass, bottle glass, nails, sewing pins, and numerous styles of buttons. Also recovered were a whole ink bottle, a toy tin soldier, two coins, a ceramic figurine, a ceramic marble, and an embroidered bugle insignia.

The high concentration of window glass recovered from this room suggests the presence of at least one window. Because the remaining walls are below window level, no evidence of the window's location was left. A heavy concentration of window glass in the north-central portion of the room suggests that a window may have been present in the northwestern corner of the room and that the wall fell inward.

ROOM 4 (SU 16)

Room 4 is actually the hallway connecting Rooms 2 and 5 and providing the entrance into Room 3 (see Figure 6.7). Doorways are found on all four walls; the one on the east opens onto the placita. This latter door measures almost 5 feet wide, whereas the other three are 3.3 feet wide. No framing elements were found on any of the doors. The wall remnants range between 6 and 24 inches high, with remnant plaster evident only on the western wall. Unlike the plaster in the other rooms, this plaster is painted pink. No floor joists were found, but two tongue-and-groove boards were recovered at roughly the height of the floor. No foundation was evident.

The matrix within this hallway mirrors that of Room 3. Artifacts came mainly from Stratum 3 and included nails, some bottle and window glass, a few buttons, and one coin.

ROOM 5 (SU 17)

Room 5 is the northernmost room of the western ell. Time did not permit the complete excavation of this room, so the investigations focused primarily on exposing the walls. This strategy resulted in the excavation of 26.5 m^2 or 74% of the room (see Figure 6.7). Documentary records indicate that this room functioned as a kitchen for the officers' quarters.

The walls in this room range between 2 and 6 inches high, which suggests they had eroded down to the footings. No plaster was evident. The back wall consists only of the basalt foundation; the wall is completely gone. Basalt cobbles are also present along the exterior of the northern half of the eastern wall. A 1-m-wide opening in the basalt foundation is present in the northeastern corner, suggesting a doorway. Two north-south running floor joists were exposed in the northern half of the room. No floorboards were found within the excavation units, however.

A concentration of ash, charcoal, and burned bone was found next to the basalt foundation approximately 2 m west of the opening. Designated Feature 2, this concentration measured 60 cm wide, 50 cm long, and 4 cm thick. This may have marked the location of a stove.

The matrix within this room consisted primarily of a melted adobe–plaster–gravel mix underlain by a more-compacted use surface. The artifacts recovered from this room consisted primarily of window glass and bone fragments followed by miscellaneous can fragments, pieces of bottle glass, a few ceramic fragments, several buttons, and a clay pipe bowl.

As with the other rooms, the walls were not high enough to ascertain the location and number of windows. The high percentage of window glass within the artifact assemblage clearly indicates that at least one window was originally in this room. An extensive concentration of window glass found in the east-central portion of the room indicates that a window was probably located on the eastern wall and that the wall fell into the room.

A test unit placed on the north side of the foundation (SU 20) was excavated to 50 cm below modern ground surface. This unit showed the foundation to be one course high. Several pieces of window glass were recovered near the bottom of this grid. A slight dampness was noted in the lower levels of this unit, which may account for the basalt foundation in this portion of the quarters, but this is speculative at best.

ROOM 6 (SU 18)

Room 6 is just east of Room 1 (see Figure 6.3). The investigation of this room was limited to a 1.5-m-wide trench excavated along the shared wall. This trench was taken down to the use-compacted surface that probably underlay the earlier jaspe floor.

As noted earlier, this wall ranges from 10 to 24 inches high. At least three plastering episodes applied over one-quarter inch of mud coping are evident in the northwest corner. Although no baseboards were found on the wall in this room, 1-inch-square pegs placed approximately 16 inches apart were embedded in the wall and probably served to attach baseboards to the wall. A two-by-four floor joist was found abutting the northern wall.

The matrix within this trench was the same as that in Room 1, including the layer of trash, which would have underlain the wooden floor. The artifacts recovered from the limited excavations in this room consisted primarily of pieces of bottle glass and miscellaneous metal fragments. Noteworthy items included the bottom half of a padlock, the metal casing to a harmonica, and the lower portion of a hoe. ✠

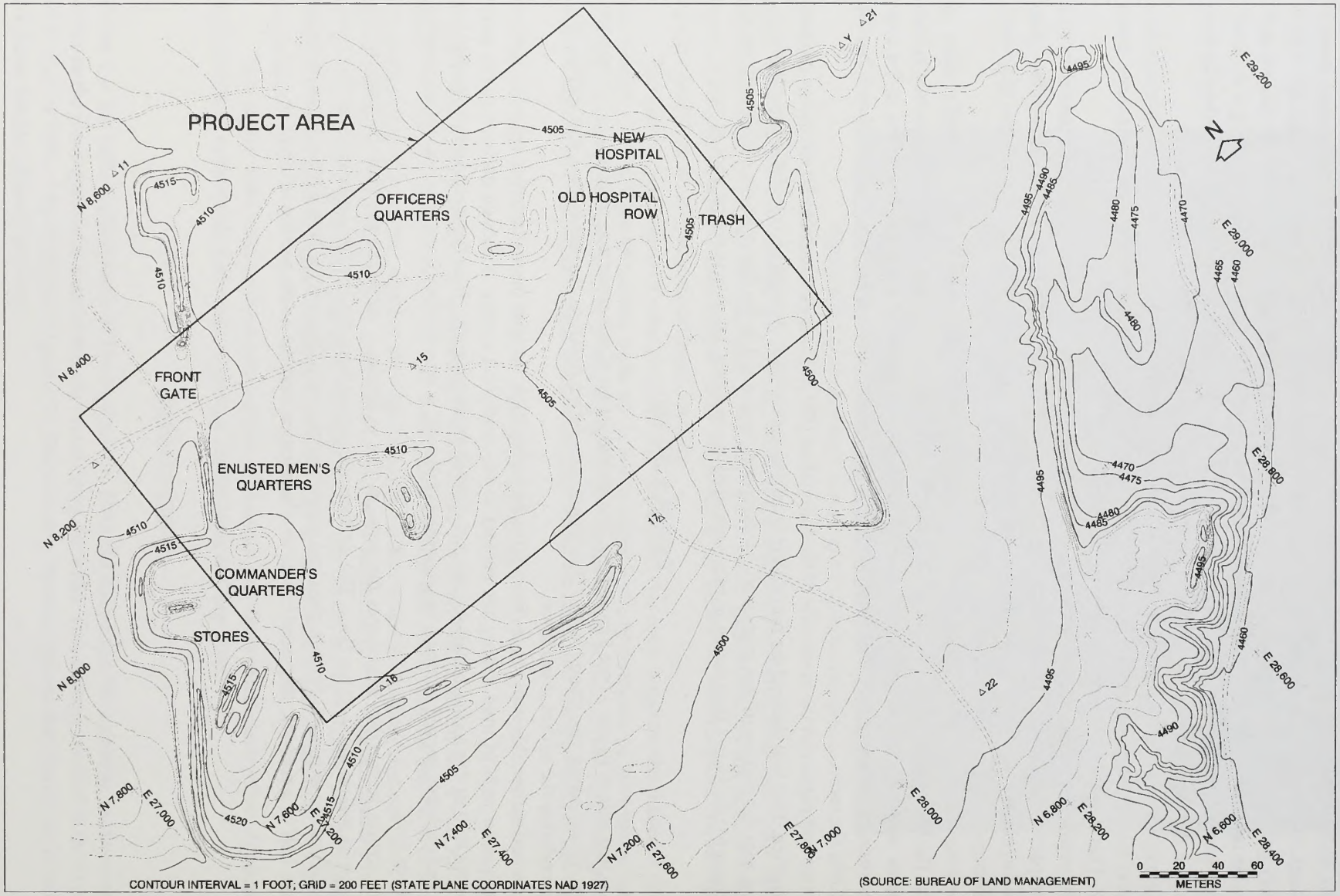
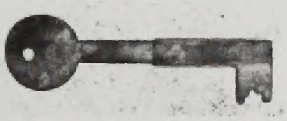


Figure 7.1. *Topographical map of Fort Craig showing the new hospital and its relationship to the other study areas.*

Chapter 7

THE NEW HOSPITAL



THE WORK EFFORT FOR THE 1994 SEASON focused primarily on the new hospital located in the northeast corner of the fort (Figures 7.1 and 7.2). Also investigated was the area between the new and old hospitals, the area outside the north and south doorways of the hallway, and a trash concentration to the east of the old hospital complex.

The decision to excavate in the new hospital was based on several reasons. First, the new hospital was one of the last buildings constructed at the fort, and we wanted to see if there were any differences between earlier construction methods and this later construction episode. Second, this building contained the only room specifically designated for use by the buffalo soldiers, and we were hoping to obtain archeological evidence regarding the status of this group of soldiers. Finally, the hospital was one of the few adobe buildings to have standing walls as late as 1970. Since that time, the rate of deterioration has been so rapid, down to the foundation in some areas, that we wanted to salvage whatever information remained before it was lost forever.

THE NEW HOSPITAL

Architectural plans of the new hospital showed that it consisted of two rooms separated by a 10-foot-wide, 22-foot-long hallway. Each ward measured 30 feet long by 22 feet wide and had walls 14 feet high. Two 4-by 6-foot windows were found on the south and north walls. Entrance into each ward was through a centrally placed doorway in the hallway. The rooms were heated by fireplaces located on the west wall of the black ward and the east wall of the white ward (see Figure 12.1).

Time constraints did not allow for the complete excavation of the hospital. Thus within the wards (SUs 21 and 23) work effort concentrated around the fireplaces and along the walls. Only the hallway (SU 22) was fully excavated (Figure 7.3).

Unlike at the other buildings examined during the first three seasons, excavations within the hospital revealed that the entire building was built on a basalt foundation consisting of footings and stem walls. The footings are constructed of one or two courses of irregularly sized basalt cobbles set within a probable hand-dug trench. Footings are present under all the exterior walls and the two interior walls of the hallway.

Exterior stem walls constructed of shaped basalt cobbles were then placed on top of the footings. These stem walls average 50 cm high by 40 cm wide and are present only under the exterior walls. A small, 10-cm-wide ledge along the interior edge at the top of the stem wall served as a footing for the floor joists.

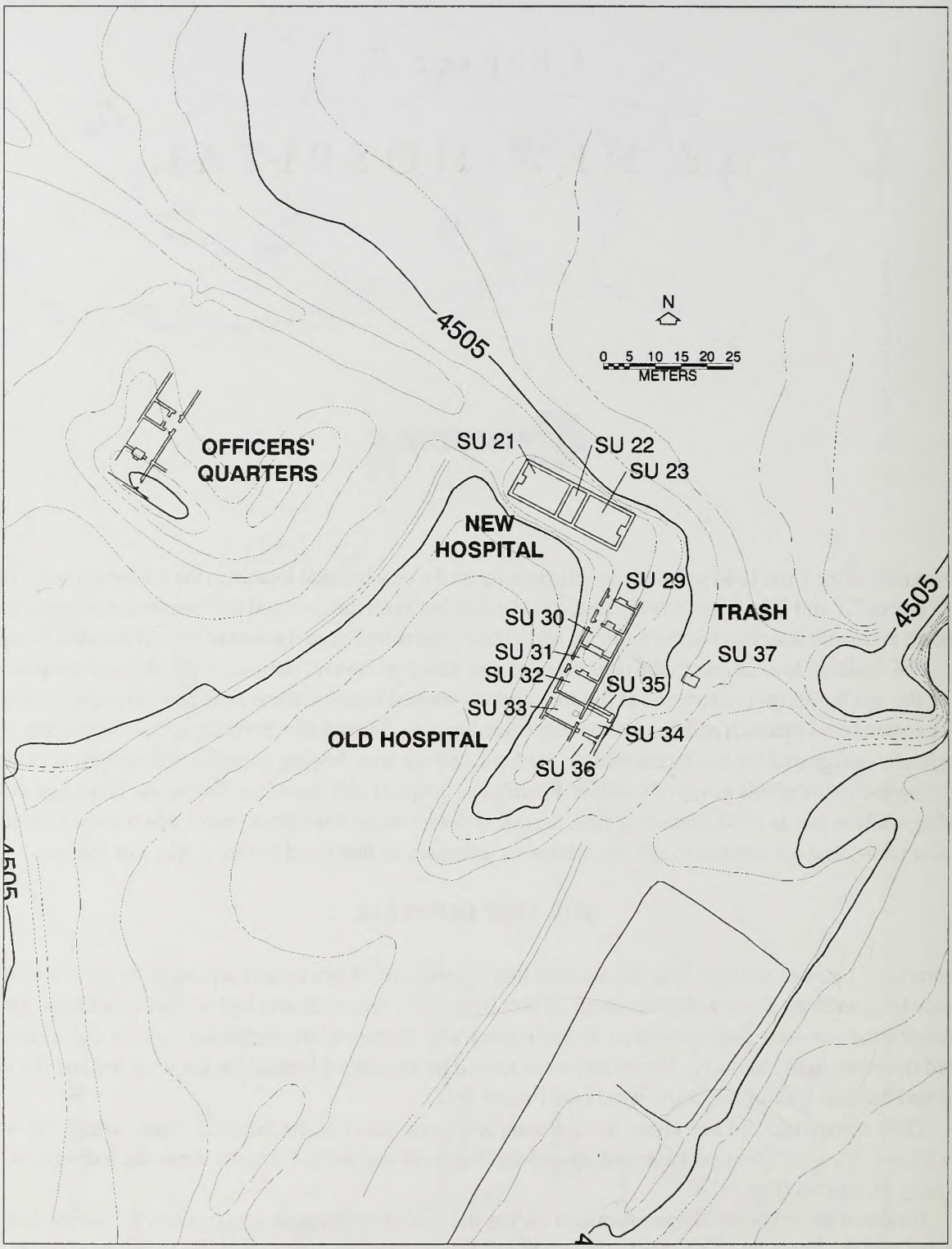


Figure 7.2. Plan of the new hospital showing data recovery units.

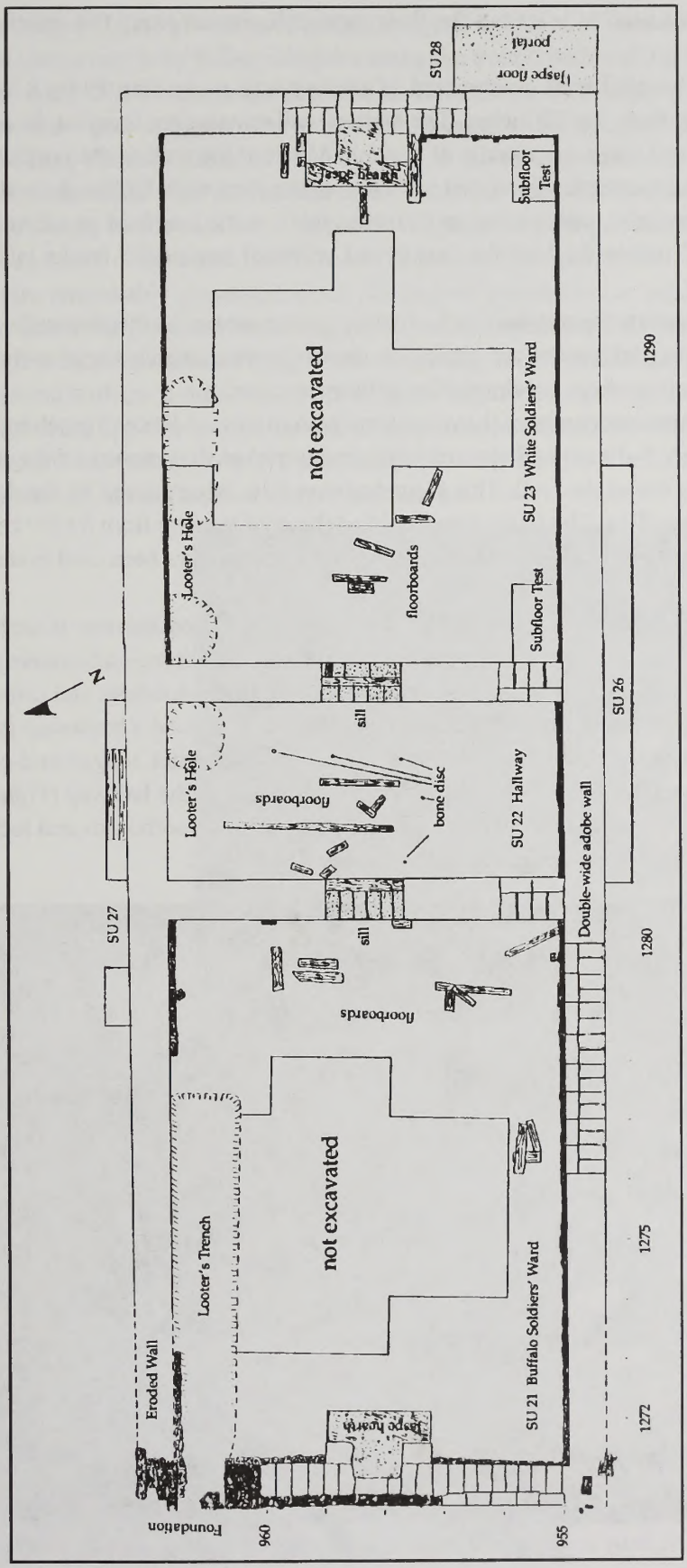


Figure 7.3. Plan of excavations in the new hospital.

Numerous wooden shims used to level out the floor were still present along this interior edge, especially along the southern wall.

The walls of the hospital were constructed of adobe bricks measuring 19 by 8 by 4 inches and the remnants range in height from 4 to 20 inches. The highest wall remains are found at the southern corners of the wards and hallway and the interior walls of the hall. Much of the wall in the northwest and southwest corners of the black ward is completely eroded to the top of the stem wall. Unlike the walls examined in the soldiers' and officers' quarters, which average 19 inches thick or the length of an adobe brick, the walls in the hospital average 27 inches thick or the length and width of two adobe bricks laid in an alternating pattern.

Remnants of one-quarter to one-half inch of white plaster are on the interior walls of the hallway and wards. Several patches of pink plaster are present in the white ward, which suggests that these walls may have been painted (though perhaps not during the military occupation).

The wall in the southwest corner of the white ward also shows evidence of patching. The original wall is recessed approximately 8–10 cm and appears to have slumped at the juncture of the stem wall, possibly from water undercutting the adobe wall. This slumping may have been caused by the delay in completing the construction of the building. The patch consists of adobe mud ranging from 8 to10 cm thick and ca. 1.6 m long. Pieces of wooden blocks are embedded into the patch and may have been used to attach the baseboards to the wall.

As noted above, entry into each ward was through a centrally located doorway in the hall. The doorways measure ca. 4 feet wide and have adobe brick thresholds underlaying tongue-and-groove flooring. Remnant pieces of two-by-six framing elements were present in the fill of each doorway and below the tongue-and-groove flooring in the doorway to the white ward. This flooring is painted a battleship gray.

While no floor joists were found, numerous pieces of one-inch-thick tongue-and-groove floorboards were found at the approximate level of the floor. Most were found in the hallway (Figure 7.4), but unlike those found in the doorway, none exhibited any paint. The dearth of floorboards and lack of joists implies that these items were probably scavenged after the closure of the fort.



Figure 7.4. *Hallway in the new hospital after excavation, showing remnant floorboards.*

Because upwards of 10 feet of wall have eroded away, no evidence of window sills remains. The floor plan of the hospital shows two 4- by 6-foot windows along the front (south wall) of the wards and along the north walls of each ward. No windows are depicted in the hallway. The small quantity of window glass recovered from the two wards suggests that most of the windows had been removed, probably after the abandonment of the fort. Concentrations of window glass in the eastern portion of the black ward and the southeastern corner of the white ward correspond to the locations of the windows along the southern walls.

As previously stated, both wards were heated by fireplaces centrally located on the west wall of the black ward and the east wall of the white ward. Given the amount of erosion of the walls, the lower portions of both fireplaces are remarkably preserved. Each fireplace is constructed of adobe bricks placed on the compacted surface below the floor and extending ca. 50 cm into each ward, with the external wall of each ward incorporated into its construction. Wing-walls measuring 25 cm across on either side of the hearth. Each hearth is plastered with ca. 2-inch-thick jaspe (Figure 7.5). An adobe ledge in front of the base of the fireplace in the black ward appears to have served as a support for floor joists, whereas the fireplace in the white ward had two-by-four and two-by-six joist supports at its base. Burned, handmade matches were recovered from the ash fill in the fireplace in the black ward.

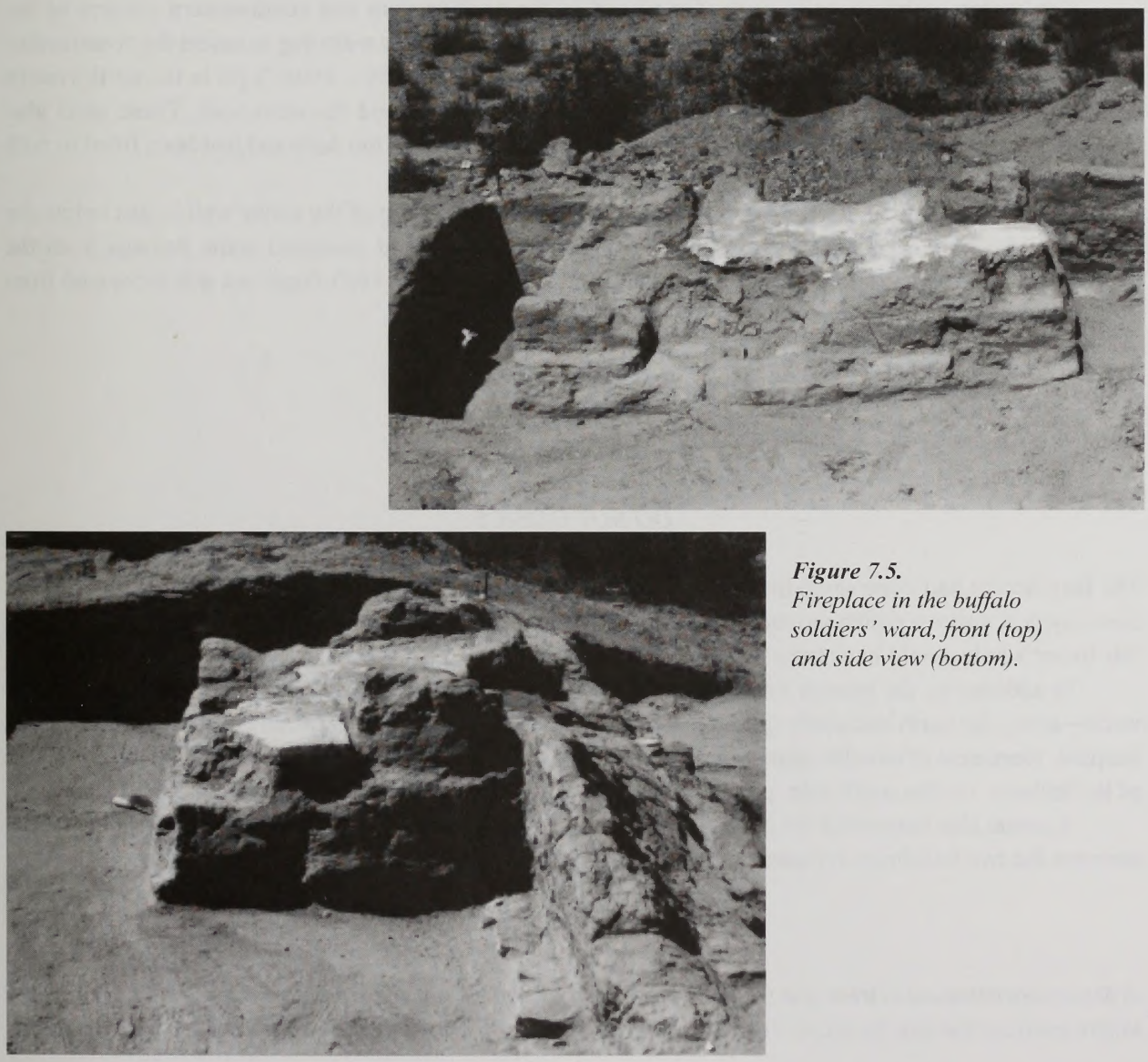


Figure 7.5.
Fireplace in the buffalo soldiers' ward, front (top) and side view (bottom).

The matrix within the two wards and the hallway consisted of four basic stratigraphic units, though not all were present in the eroded corners of the wards. Stratum 1 was the 4–6 cm of loose eolian sands covering the site. This stratum was underlain by Stratum 2, a 2- to 45-cm-thick mixture of melted adobe, plaster, and gravels suggesting both roof and wall fall. Stratum 3 consisted of a layer of melted adobe and silt first encountered about 5 cm above the floor. The base of this stratum corresponded to the level of the floor. Stratum 4 represented a layer of siltier sands resting on a compacted use surface found ca. 10 cm found below the floor and interior joist support ledge. In the eroded corners, Stratum 1 was underlain by Stratum 4.

Artifacts were recovered from all four stratagraphic units, but the majority came from Strata 3 and 4. Most of the artifacts consisted of bottle glass, nails, window glass, several bullets, buttons, fragments of dishes, and construction hardware. Several pieces of corrugated roofing tin were found, which suggests that the "mortar" roof (see Chapter 12) may have been replaced by a tin roof.

The fairly high number of artifacts recovered from Stratum 4 is puzzling, owing to the presence of the tongue-and-groove floor. The presence of these artifacts raises two questions: Was the new hospital built on an earlier trash scatter associated with the old hospital? Was the trash thrown into the building before the floor was laid? Analysis of the artifacts recovered from this stratum was geared to addressing these questions.

Exploratory subfloor units were also placed in the northwestern and southwestern corners of the white ward and in the northeastern corner of the black ward. These units were dug to assess the construction design of the foundation and to determine the extent of damage done by a looter's pit in the northwestern corner of the white ward. These excavations revealed the footings and the stem wall. These units also revealed that the trench for the footings on the north wall had been dug too deep and had been filled in with a layer of trash and river sand before the footings were laid.

The looter's hole in this corner extended about 1 m below the top of the adobe wall to just below the footings. While a small portion of the interior of the adobe wall had sustained some damage from the digging, no damage was apparent to the stem wall and footing. A post-1965 Pepsi can was recovered from the hole along with an 18- by 24-inch sign:

EXPLORER POST 74
W.S.M.R. N.M.
HISTORICAL
SITE
DO NOT DEFACE

The Boy Scouts had done some limited work around the fort in the early 1970s and had placed several of these signs at various points around the interior (Marion Grinstead, personal communication 1993). Thus, this looter's hole would have been dug sometime after that.

In addition to the interior excavations, three 1-m-wide trenches were excavated along the exterior walls—along the north and south entrances to the hallway and in the space between the east wall and the old hospital. Remnants of wooden steps which probably led down to the bathhouse were found on the north side of the hallway. On the south side, pieces of wood from the front portal floor were still in place.

A portal also connected the old hospital to the new hospital. While no wood was found in the trench between the two buildings, remnants of the jaspe floor were present at ground level.

THE TRASH AREA

A dense concentration of trash was present behind (east of) the old hospital complex. Because of the increased visitor traffic to the fort, the BLM was concerned that some artifacts within the concentration would disappear.

Thus we were asked to do a limited amount of work in this area.

A 10 by 10 m surface collection unit (SU 24) was positioned over the densest part of the concentration. More than 1,171 artifacts were collected—910 fragments of glass, 228 pieces of Euroamerican ceramics, and 33 metal artifacts. The majority of artifacts recovered from this area date to the military occupation of the fort. Given the fastidiousness of the post commanders concerning the cleanliness of the fort, it is highly probable that the trash scatter was created after the military closed the fort.

A second concentration, which had been pointed out as being the main hospital dump, was located just north of the surface collection area. A large looter's hole was present in the middle of this area so we decided to test the area to see if any integrity was left to the dump. Fifteen judgmentally placed 1 by 1 m units (SU 25) were placed around the edges of the looter's pit and were excavated in arbitrary 10 cm levels. Eight of the units to the west of the pit ranged in depth between 40 cm and 1.5 m and the artifacts exhibited depositional integrity. The other units had depths between 10 and 25 cm and the matrix appeared more churned. This suggests that we were probably digging in the looter's backdirt. Almost 1,600 artifacts were recovered, including 965 fragments of glass, 360 bone, 137 metal artifacts, 107 pieces of Euroamerican ceramics, and 18 bullets. ✠

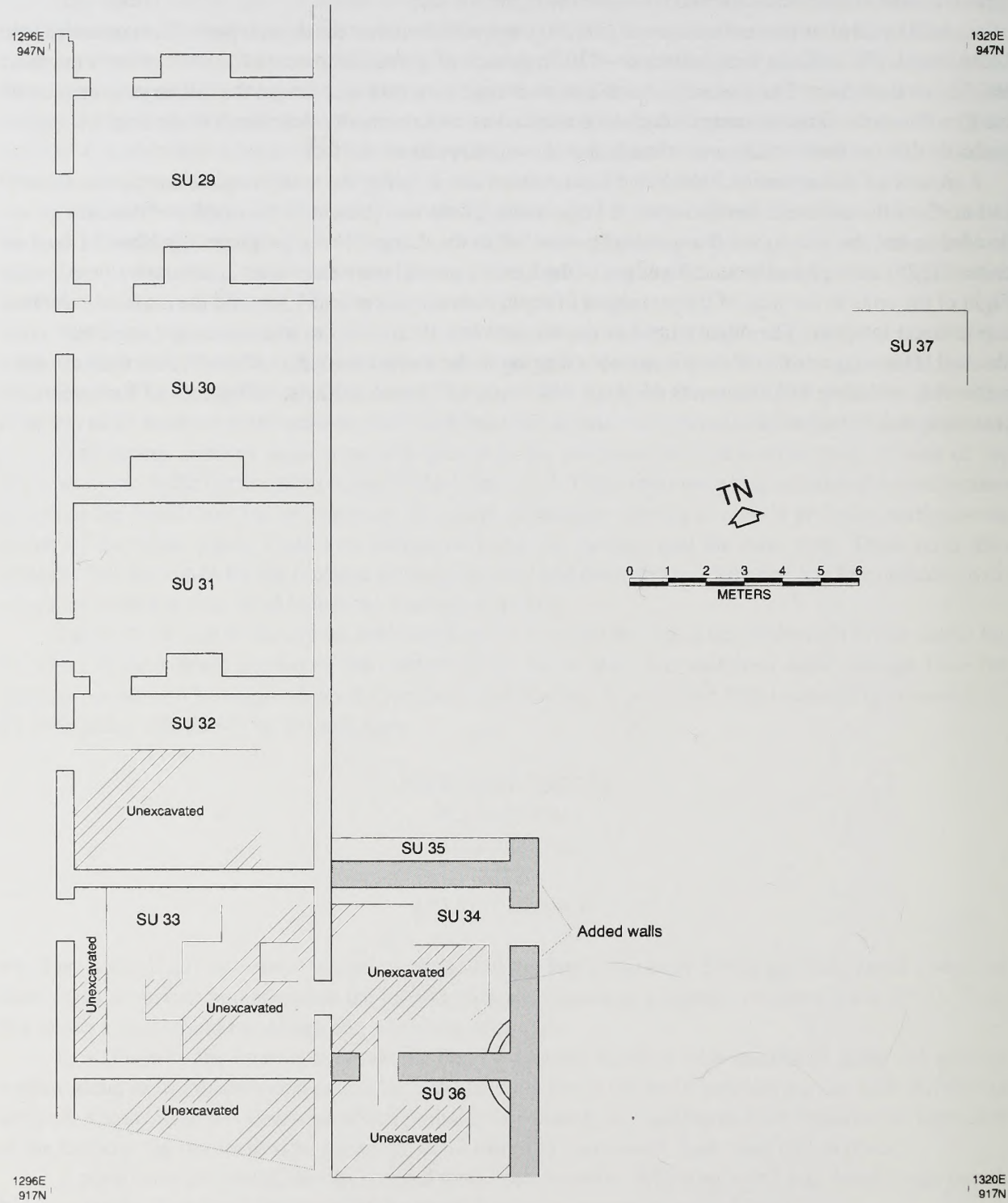


Figure 8.1. *Location of data recovery units in the old hospital.*

Chapter 8

THE OLD HOSPITAL



The fifth and final season of work at Fort Craig centered in rooms within the old hospital and hospital row, located in the northeast corner of the fort (Figure 8.1). When the new hospital was finally completed in the mid-1870s, the rooms of the old hospital served various functions, including offices, kitchen, dispensary, and storeroom. In addition, rooms added to the existing structure in the late 1860s functioned as quarters for officers and occasionally for laundresses and other personnel (see Chapter 13).

Three rooms within the old hospital were completely excavated and five rooms in the hospital row were partially excavated. Limited testing was also done in the steward's room located east of the hospital. Room numbers were arbitrarily assigned beginning with the northernmost excavated room.

ROOM 1 (SU 29)

Room 1 is the third room from the northern end of the hospital and was one of three that was completely excavated to the floor. This room measures 6.25 m east-west by 4.9 m north-south and has three 1-m-wide doorways—one exterior door in the middle of the west wall, one in the northwest corner to the room to the north, and one in the southwest corner into Room 2. A line of plaster exposed below the floor in front of the door on the west wall suggests a remodeling episode. A small fireplace is located in the central portion of the southern wall (Figure 8.2).

The wall height ranges from a low of 33 cm in the southwest corner to 76 cm in the northwest corner. At least three plastering episodes are evident on the walls throughout the room. Wooden baseboards are found only in the northwest corner on either side of the doorway. These are painted white over blue.

Because the walls were eroded to below the level of the windows, nothing remained to indicate their location. The 1884 plan of the hospital complex (see Figure 13.3) depicts two windows on both the east and west walls of this room. A large concentration of window glass was found in the northwest and central portions of the room and two smaller concentrations were along the eastern wall suggesting at least three windows were present before the walls collapsed inward.

The floor in this room is of jaspe, most of which is intact. Numerous nails found embedded in the floor may have served as float guides to ensure a level floor. Several patches of an inferior grade of jaspe are present across the floor, and the jaspe in front of the door in the northwest corner has been cut out (Figure 8.3). This

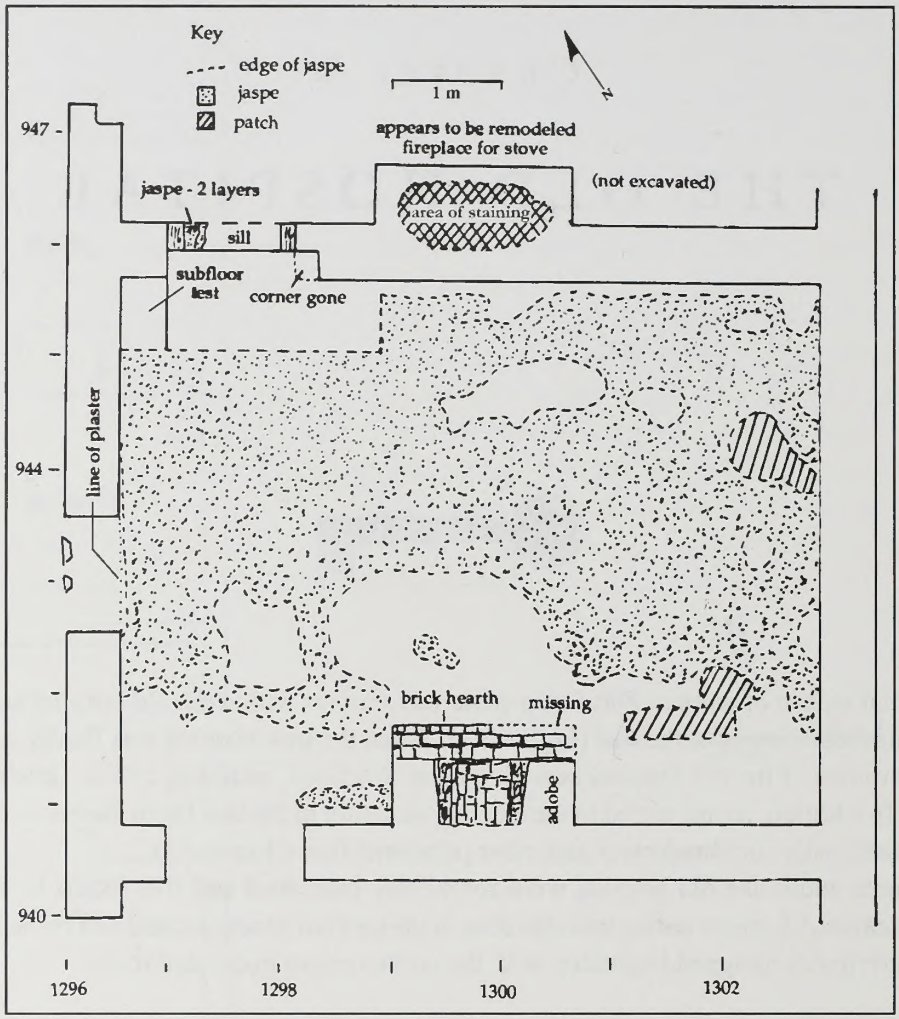


Figure 8.2. *Plan of Room 1 in the old hospital.*



Figure 8.3. *Room 1 in the old hospital after excavation, showing the jaspe floor.*

patch may indicate a remodeling episode associated with the doorway.

As noted above, a fireplace is located in the middle of the southern wall. It measures 1.7 m wide by 60 cm deep. The wing-walls are constructed of adobe bricks and faced on the interior with ceramic bricks. Ceramic bricks also face the interior firebox. A small brick hearth measuring 35 cm wide by 1.7 m long is in front of the fireplace (Figure 8.4).

The matrix within this room, as well as in all the rooms investigated, consisted of three basic stratigraphic units. Stratum 1 represented the 4–10 cm of loose eolian sands covering the site. This stratum was underlain by Stratum 2, a 5–55 cm mixture of melted adobe, plaster, and some gravels, suggesting both roof and wall fall. Stratum 3 represented the 10 cm of fill found above the floor.

Artifacts were recovered from all three stratigraphic units, but the majority came from Strata 2 and 3. The artifacts consisted primarily of window glass, nails, some bottle glass, corrugated roofing tin, cedar shingles, and miscellaneous pieces of metal. A nearly complete Adolphus Busch beer bottle with the paper label still intact was recovered from the fill within the fireplace along with a telegraph insulator.



ROOM 2 (SU 30)

Room 2, the next room to the south, was also completely excavated. This room measures 6.25 m east-west by 4.85 m north-south and has three doorways—two in the northwest corner opening into



Figure 8.4.
Fireplace in Room 1 of the old hospital.

Room 1 and onto the parade ground, and one in the central portion of the east wall opening to the back of the fort (Figure 8.5). A former doorway in the southeast corner entering the room to the south had been closed off during a remodeling episode by a wall made of a single row of adobe bricks (Figure 8.6). A chimney is situated in the middle of the southern wall. This room was the original kitchen for the old hospital (Marian Grinstead, personal communication 1994).

The walls range in height from 39 cm in the northeast corner to 72 cm in the southeast corner. At least three episodes of white plastering are evident on all the walls; the last one consists of quarter-inch-thick cement coping.

A wooden floor was present in this room. Although most of the floorboards are missing, the three-by-six joists were still in place. These were laid out north-south with the spacing between them ranging from 50 to 75 cm. A layer of silt containing some trash was placed between the boards to hold them in place. East-west running floorboards were present in the southwest corner; all were pine (Figure 8.7).

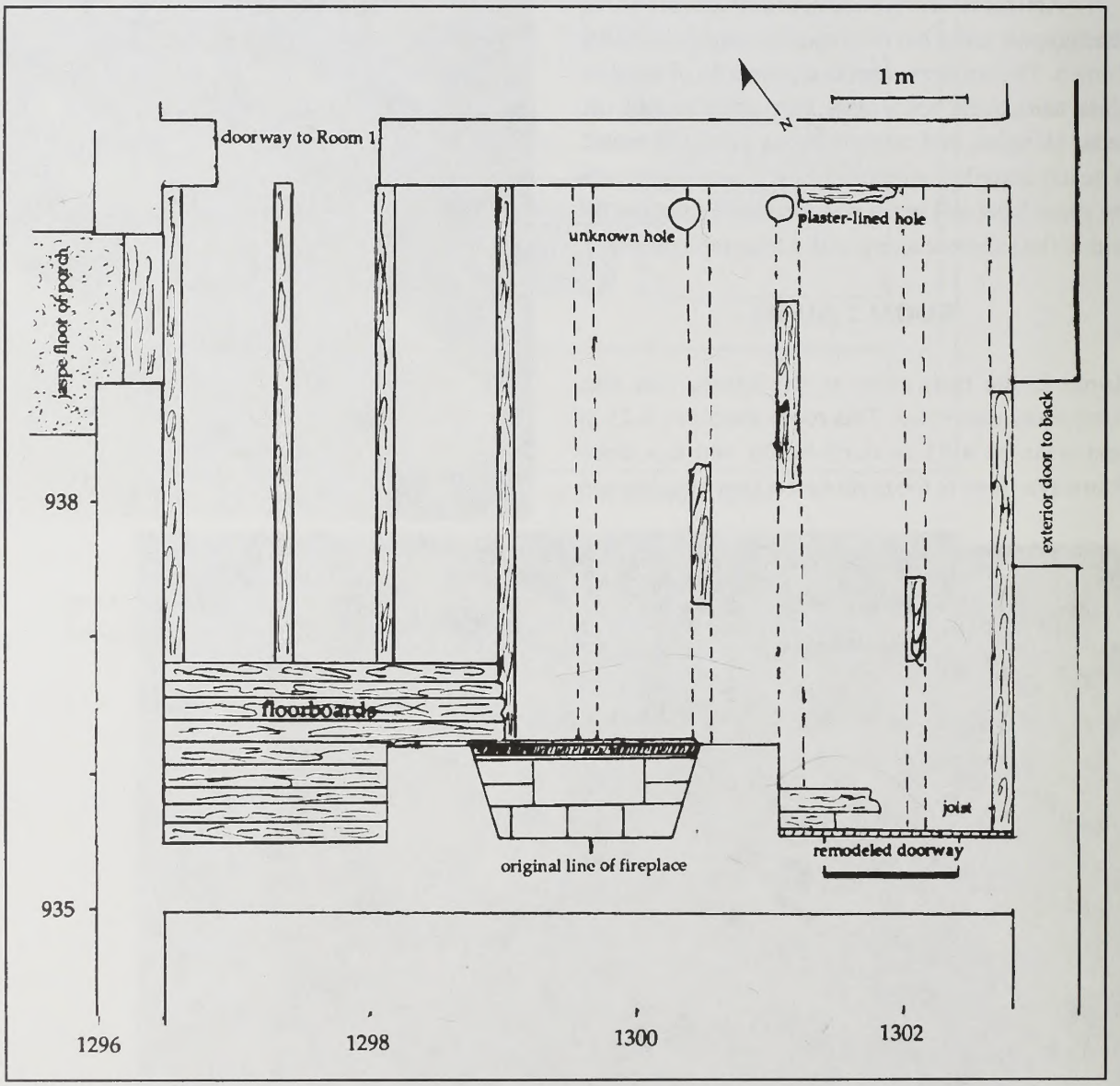


Figure 8.5. *Plan of Room 2 in the old hospital.*

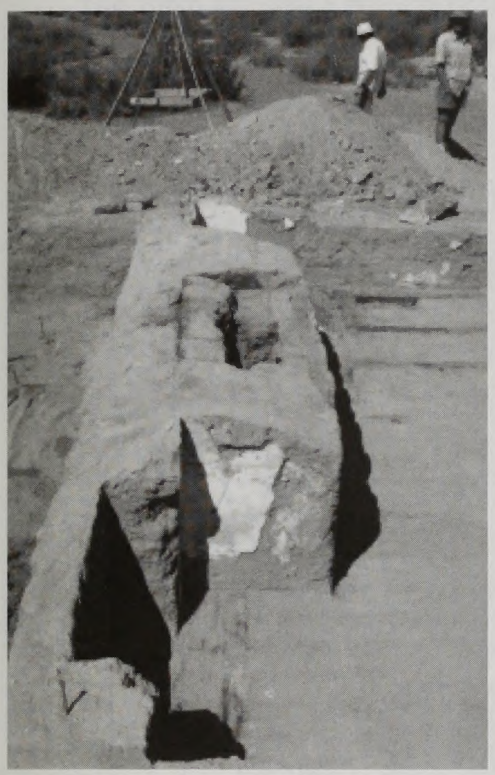


Figure 8.6. *Remodeled doorway in Room 2 of the old hospital.*



Figure 8.7. *Room 2 in the old hospital after excavation, showing floor joists (top) and flooring (bottom) in southwest corner.*

Two 18-cm-diameter by 25-cm-deep holes were found under the floor joists along the north wall. One was plaster-lined. They may have been used to hold support posts for a sagging roof.

The chimney, situated in the middle of the south wall, measures 2.90 m across the front, extends 70 cm into the room, and stands 83 cm high. At least two plastering episodes are evident, underlain by 4-cm-thick coping. The last episode had been painted blue and covered by a whitewash. The flue measures 85 cm by 35 cm, and from the excavations it is obvious that this was a modified fireplace as courses of adobe bricks had been added to the interior. More than likely these bricks were put there to narrow the chimney opening to accommodate a stove. An iron bar was embedded across the front of the flue, possibly to add stability to the chimney (Figure 8.8). No hearth is present, although one may have been removed when the wood floor was laid.

Most of the artifacts recovered from this room were bottle glass, nails, corrugated roofing tin, and miscellaneous metal fragments. A stovepipe fragment was found just above the floor within the roof and wall fall stratum (Figure 8.9). A whole perfume bottle was also recovered from Stratum 2, along with several fragments of a glass tube found just above the floor in Stratum 3.



Figure 8.8.
Chimney in Room 2 of the old hospital.





Figure 8.9.
Stovepipe fragment found just above the floor in Room 2 of the old hospital.

ROOM 3 (SU 31)

Located immediately south of Room 2, Room 3 was originally the old surgery and was the third room to be completely excavated. This room measures 6.25 m east-west by 4.5 m north-south and has three 1-m-wide doorways—an exterior door in the western wall in the southwest corner, a second exterior door in the eastern wall in the southeast corner, and an interior door in the southern wall, also in the southwest corner. A chimney is in the middle of the southern wall (Figure 8.10).

Wall height ranges from 68 cm in the southwest corner to 98 cm in the southeast corner. At least three plastering episodes are evident on the walls. Baseboards were still attached to the eastern and southern walls and a small portion of the northern wall. These one-by-eights were painted blue (Figure 8.11). Three courses

of ceramic brick inlaid in the adobe bricks were found in the western wall about 1 m north of the exterior door. These bricks may have supported a window.

This room also had a wooden floor constructed in the same manner as the one in Room 2. Intact flooring still covered the eastern half of the room (Figure 8.12). Fragments of newspaper were stuck to the floor in the southeast corner (Figure 8.13). Unfortunately, no date could be discerned from the legible pieces.

The chimney in this room also appeared to be a remodeled fireplace as the front is enclosed by a single row of adobe bricks. This edifice measures 1.65 m wide by 63 cm high and extends 55 cm into the room. A hearth measuring 1.65 m by 55 cm is in the front of the chimney. It was constructed of two layers of jaspe; the top layer was painted red (Figure 8.14).

Artifacts were recovered from all three strata. These consisted primarily of nails, fragments of bottle glass, and miscellaneous metal pieces. Other artifacts included a few buttons, a glass stopper, and an 1850 half dime.

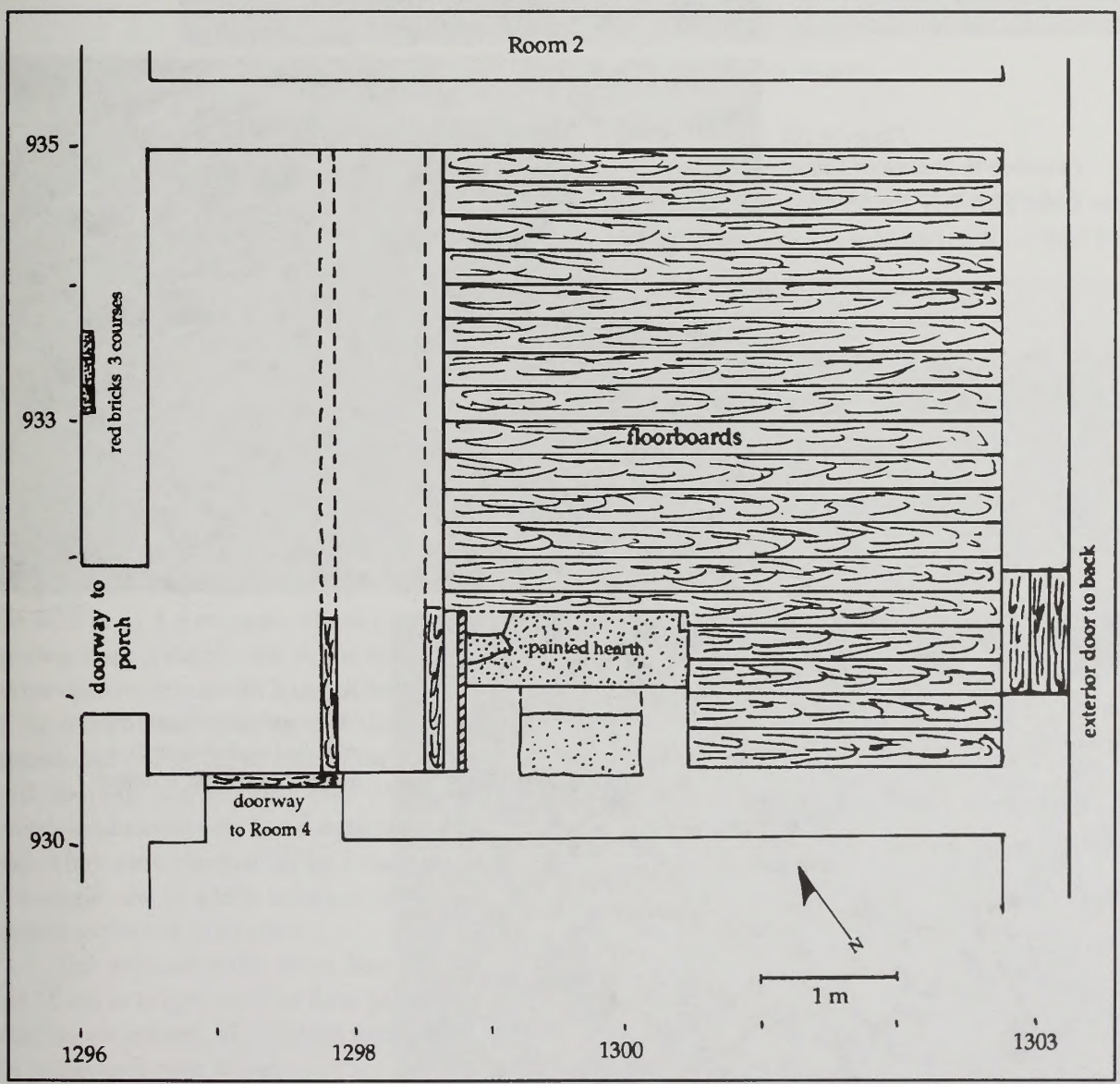


Figure 8.10. *Plan of Room 3 in the old hospital.*



Figure 8.11.
Baseboards attached to wall in Room 3 of the old hospital.



Figure 8.12.
Floorboards in eastern half of Room 3 in the old hospital.



Figure 8.13.
Fragments of newspaper attached to floorboards in Room 3 of the old hospital.

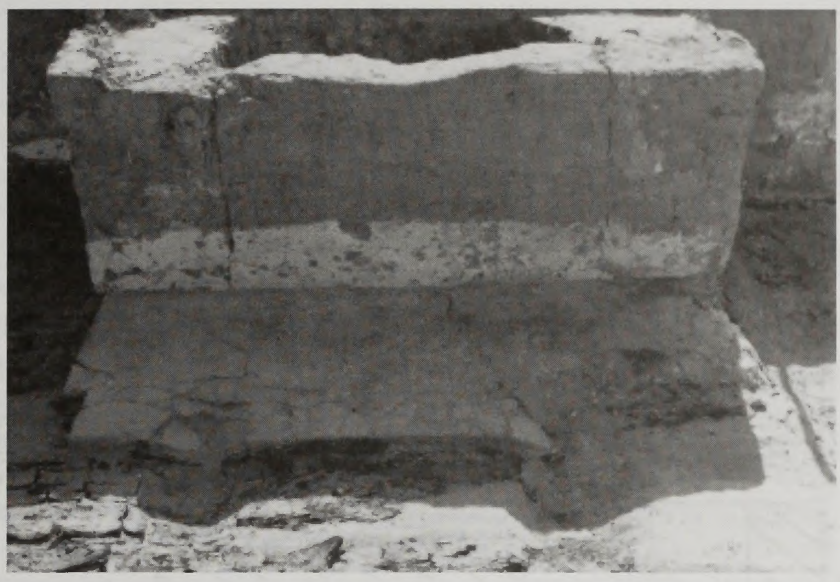


Figure 8.14. *Chimney and hearth in Room 3 of the old hospital.*

ROOMS 4, 5, 6, 7, 8 (SUs 32, 33, 34, 35, 36)

Partial excavations were conducted in five rooms to the south and southeast of Room 3. Rooms 4 and 5 were part of the original hospital complex, while Rooms 6, 7, and 8 had been added in the late 1860s as additional officers' quarters.

Data recovery in these rooms consisted first of limited surface scraping to define the walls (Figure 8.15). Next trenches and/or 1 by 1 m units were positioned adjacent to the walls and excavated to the floor (Figure 8.16).

Room 4 (SU 32)

More than 12 m^2 of deposits were removed along the north wall and in the eastern half of this 6.25 m by 4.6 m room. Three 1-m-wide doorways are present—one in the northwest corner opening into Room 3, one in the middle of the western wall opening onto the parade ground, and one in the middle of the eastern wall opening into Room 6 (SU 35). Two remodeled doorways are found on the southern wall. They were blocked off by a wall made of a single row of adobe bricks, in a similar fashion as the one in Room 2.

The exposed walls range between 51 and 76 cm in height. At least three plastering episodes are evident, all of which were white. No baseboards were found.

The floor was primarily a 4- to 5-cm-



Figure 8.15. *Outline of walls in Rooms 4, 5, and 6 of the old hospital.*

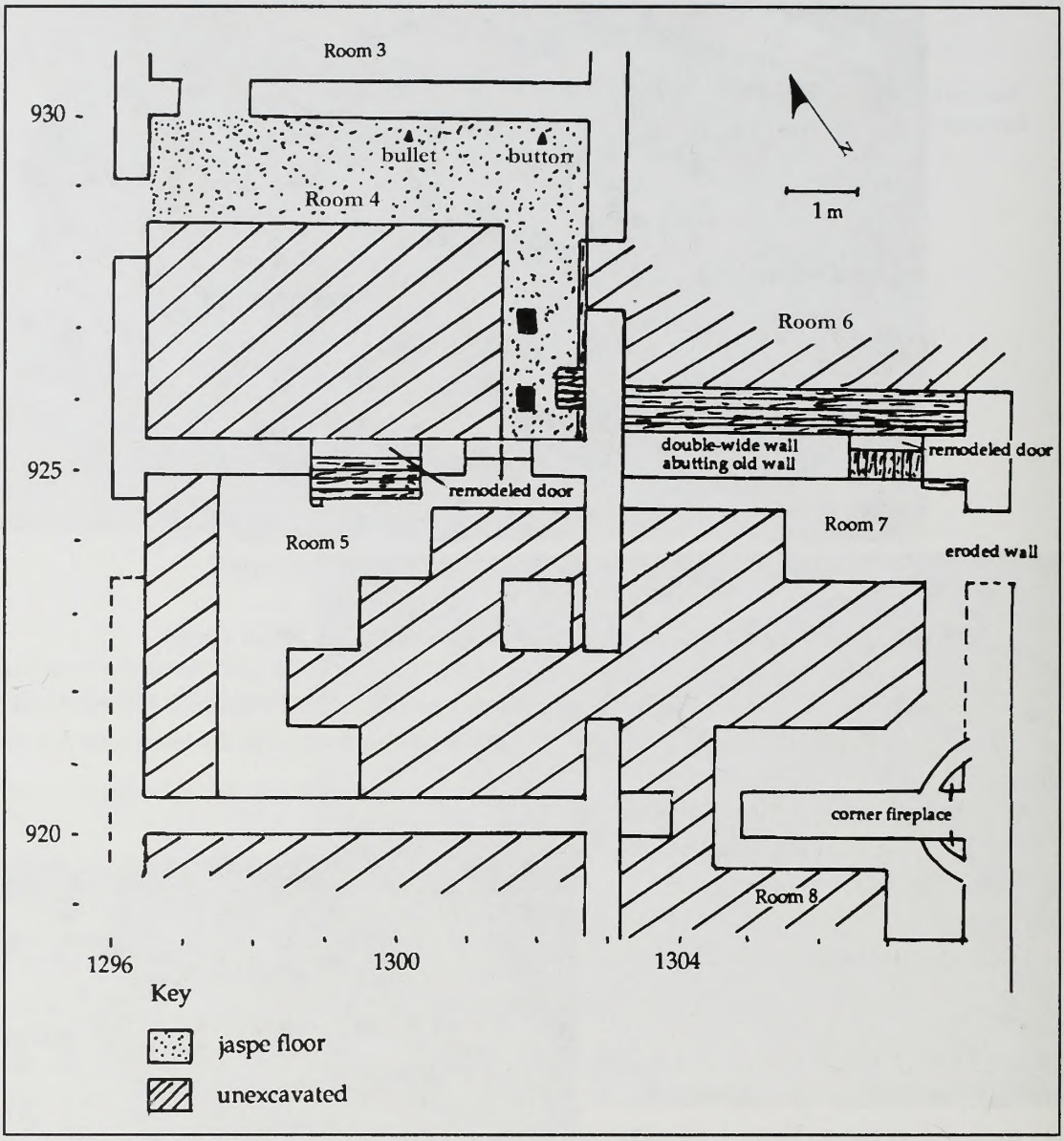


Figure 8.16. *Plan of Rooms 4, 5, 6, 7, and 8 in the old hospital.*

thick jaspe that appeared to have been laid down in sections. Along the eastern wall, however, remnants of a wood floor overlaying the jaspe were still present. There was no evidence to indicate that a wooden floor covered the room, although it could have been scavenged after the fort was closed. A Minie ball and a GSA coat button were found embedded on the underside of the jaspé floor in the northeastern corner, which suggests they had been lost during the pouring of the floor.

Also along the eastern side, two ca. 30 by 30 cm areas about 80 cm apart had been cut out of the floor. These areas contained charcoal and burned bricks, which suggests there may have been a stove along this wall. Since this room lacked a fireplace or central chimney, the stove may have been placed there when this room was converted to quarters.

Artifacts came from all three strata and consisted mostly of glass fragments, nails, and miscellaneous metal fragments. Also recovered were a telegraph insulator fragment, a doll fragment, an 1867(?) nickel, and an 1876 quarter; all came from Stratum 3, just above the floor.

Room 5 (SU 33)

Approximately 12 m^2 were also excavated within this room. These excavation units were along the northern wall and in the western half of the room. The limited work in this room showed it to be 6.25 m east-west by 4.45 m north-south (see Figure 8.16). Two 1-m-wide doorways are present—one in the western wall, opening onto the parade ground, and one in the eastern wall, opening into Room 7 (SU 34). No fireplace or central chimney was in this room, nor was there any evidence of a stove.

Wall height ranged from 47 to 76 cm with at least two plastering episodes evident. Both were of white plaster. No baseboards were found attached to the walls.

Evidence of a wood floor was present, but most of it had been removed. Intact floorboards were found within the remodeled doorway on the north wall. From the little amount of floor remaining, it appeared that it had been laid in the same manner as that in Rooms 2 and 3.

Artifacts were recovered from all three strata. Although limited in number, most consisted of bottle glass fragments, nails, and miscellaneous metal fragments.

Rooms 6, 7, and 8 (SU 35, 34, 36)

As stated above, these rooms were added in the late 1860s as additional quarters. Interestingly, the construction techniques mirrored those of the new hospital whose construction also began at about the same time. The walls consisted of a double row of adobe bricks mortared with cement. These walls abut those of the earlier structure and range between 40 and 60 cm in height (see Figure 8.16). Two or three plastering episodes are evident on each wall and were applied over a quarter-inch-thick cement coping.

Rooms 7 and 8 are connected by a 1-m-wide doorway. Rooms 6 and 7 had a common doorway at one time, but it had been closed off by a wall of adobe bricks. These doors suggest that Rooms 7 and 8 were part of the same quarters and that Room 6 represented separate quarters. Room 7 also has a 1-m-wide doorway in the eastern wall, which opens to the back of the fort.

A wooden floor was found in place in the 4.6-m-long by 60-cm-wide trench excavated in Room 6. Remnants of a wooden floor, consisting of some scattered floorboards, were also present in Rooms 7 and 8. Several floorboards were found in place in front of the remodeled doorway in Room 7.

Two small fireplaces were present in the southeast and northeast corners of Rooms 7 and 8, respectively (see Figure 8.16). The northern fireplace is slightly larger than the southern one, and the construction techniques vary somewhat. Both, however, have rounded fronts and are built into the eastern exterior wall, with the room dividing wall separating the two (Figure 8.17).



Figure 8.17. *Two corner fireplaces in Rooms 7 and 8 of the old hospital.*

The northern fireplace measures 89 by 61 cm at its maximum and is 60 cm deep. The front wall ranges from 22 to 24 cm wide and is constructed of adobe bricks with jaspe mortar. The floor is a hard, compacted clay. A portion of the front wall was inadvertently destroyed during excavation (Figure 8.18).

The southern fireplace measures 74 by 61 cm at its maximum and is 65 cm deep. The front wall ranges from 3 to 16 cm wide (the narrow width being a reflection of the limited excavations) and is also constructed of adobe bricks, though no jaspe mortar is visible (Figure 8.19). The floor is of jaspe, and a small jaspe hearth extends 23–70 cm into the room. This hearth is lipped along the edges, which suggests that it was constructed as part of the fireplace and not as part of the floor.

Both fireplaces were filled in the upper 7–12 cm with slump and adobe bricks. In the northern fireplace, a whole serving bowl was found in this slump (see Figure 8.18) and several nails were recovered from below the slump.

In the southern fireplace, no artifacts were found in the slump, but numerous items were recovered from the ashy fill below. These included buttons, fragments of window glass, pieces of a scalloped-edge lantern globe, tin can fragments, nails, bone, an elbow pipe fragment, a shoe heel, and an officer's staff button.

Very few artifacts were recovered from the limited excavations within the rooms themselves. The few items found consisted mostly of nails and bottle glass fragments and were recovered from all three strata.

Steward's Room (SU 37)

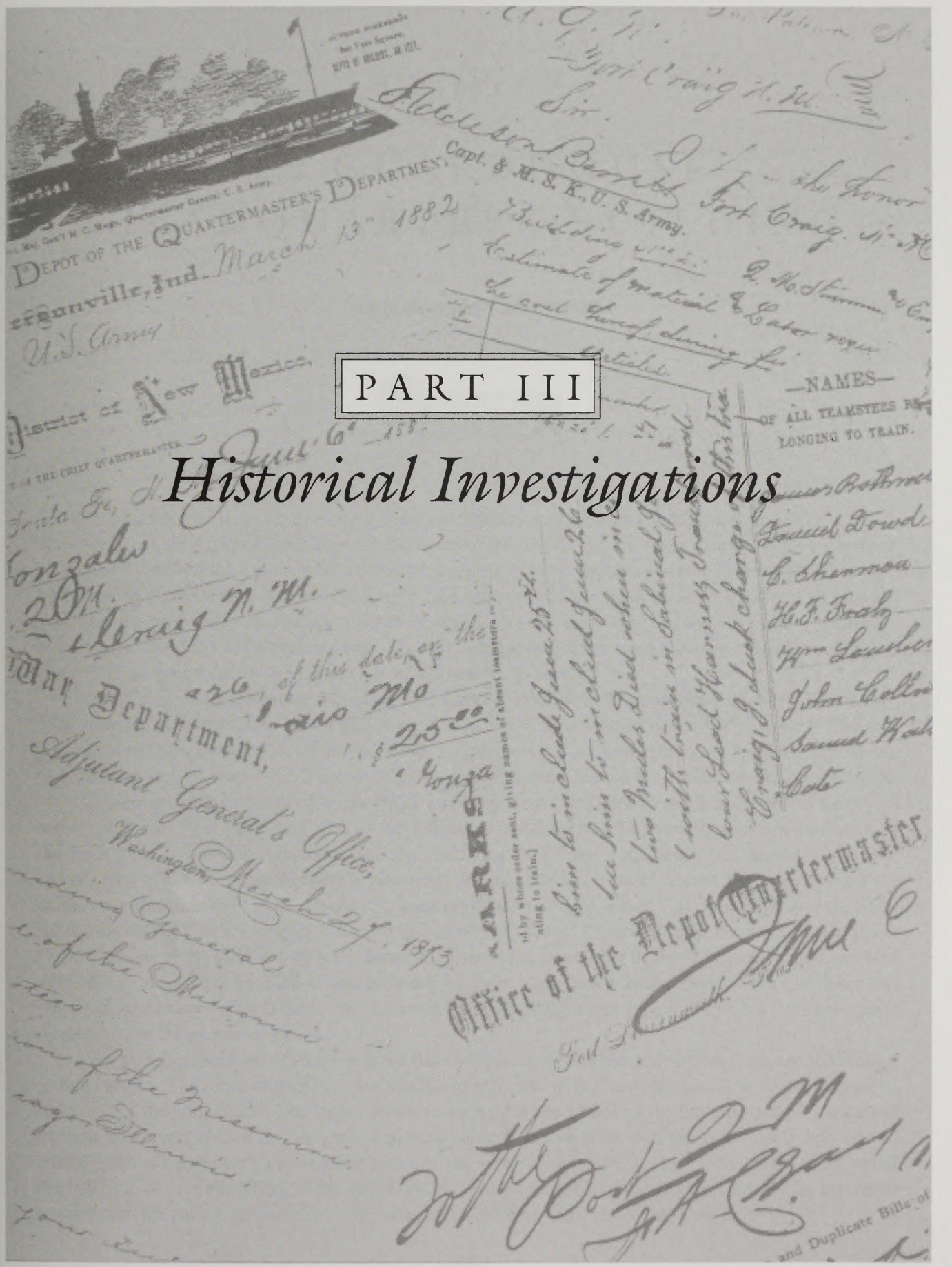
Nine 1 by 1 m grids were partially excavated within the steward's room located ca. 13.5 m east of Room 2. This room is clearly depicted on the 1884 plan of the hospital complex. No definitive walls were delineated nor was the floor found. From all appearances, this room was badly eroded. A few fragments of glass and some bone were recovered from the grid units. ✠



Figure 8.18.
Northern fireplace after excavation.



Figure 8.19.
Southern fireplace after excavation.



PART III

Historical Investigations

Chapter 9

THE GUARDHOUSE – HEADQUARTERS BUILDING

Marion Cox Grinstead



In 1853, beset by private land ownership problems, marshy ground, and a sickly garrison at Fort Conrad, New Mexico, U.S. Army officials began thinking about moving the post to a new location eight miles south on the Rio Grande. Such a move would place the troops in a better position to watch over travelers and mail by stationing them closer to known crossings on the river used by the Indians. Good land for a post garden was near the proposed site. Adding a sense of urgency to the idea were the literally rotting temporary buildings built in 1851 of cottonwood logs. These buildings were not even on the exact site selected for Fort Conrad. If the post were to be continued, it would have to be rebuilt.[1]

Fort Craig, built to replace the ailing Fort Conrad, was formally established on April Fool's Day, 1854, though, four days later, it was still referred to as the "Camp 8 miles below Fort Conrad."[2] The new post had been under construction for several weeks, but progress was somewhat hampered by the troops having to pursue Indians. At least some if not all of the troops were under canvas when the new site was occupied.

It is not possible at this point to say which buildings were completed by the time the rest of the troops arrived permanently at Fort Craig. One of the unfinished buildings was the guardhouse on the south side of the front gate; it was not completed until the following year.[3] The guardhouse was arguably the most complicated of the buildings because a basement was dug under the room nearest the gate to house the solitary confinement cells. There were six, three on either side of a 3 foot 7 inch passageway, each cell measuring 5 feet 7 inches long by 2 feet 10 inches wide by 4 feet 10 inches high. Their orientation is not known. Access to the cells was by stairs beneath a trapdoor in one corner of the room, which also provided ventilation . Additional ventilation was provided by eight auger holes drilled through the cell doors and whatever gaps existed around them. Air and a small amount of light also entered through a one-foot-square opening under the guardroom steps.[4]

The building itself was of adobe with the flat roof typical of New Mexican architecture, and it consisted of three rooms. The room nearest the gate was the guardroom, with one door opening onto the sallyport a little east of the wall center. The larger prison room was in the center of the building and was accessed through a doorway shown on one ground plan as being at the junction with the front (east) wall and on another plan as being nearly opposite the door opening onto the sallyport. A small room on the south end of the building was for the officer of the guard (the corporal or sergeant of the guard). One door in that room opened onto the parade ground. Dividing walls in the building were on an east-west axis.[5]

In front of the building was the original flagpole. Twenty feet in front of that, a stone was laid in 1869 as the initial point of the Fort Craig Military Reservation.

Keeping the flat roofs in repair and the plaster on the walls was an ongoing battle at Fort Craig, especially during summer rains. The guardhouse was no exception. New doors were installed and old ones repainted in mid-September 1863, along with the necessary bolts and padlocks. This maintenance probably included the opposite building as well. A picket-post (logs set upright in a trench) prison room was added to that building the same year when Fort Craig began receiving civilian prisoners and soldiers from other posts, thus overcrowding the available facilities.[6]

Unfortunately, this is the extent of what is known about the layout and construction of the guardhouse; the remainder of the records covers ordinary business such as prison room furniture, punishment inflicted at the flagpole, and escaped prisoners. Shortly after the close of the Civil War, sentinels were posted on the roof of the south building.[7]

Early in January 1867, the post surgeon serving with the 125th U.S. Colored Troops wrote to the post adjutant about the condition of the guardhouse, which he called "filthy" and in serious need of repair, suggesting also that a platform be built for the prisoners to sleep on and the existing one for the guards be repaired.[8] No records exist to indicate whether or not the surgeon's recommendations were implemented.

Many changes to the existing buildings at the fort were made in 1868, but nothing seems to have been done to the guardhouse. The temporary picket-post buildings from the Civil War were probably all torn down at this time, or earlier, including the prison room added to the north building. A change many desired—shingle roofs—was first discussed during the year, but this change was not accomplished until the 1880s.[9]

In February 1869, an estimate for forty fanegas (one fanega equals 1 to 2 bushels) of lime needed to repair exposed and damaged walls of all the buildings was forwarded to district headquarters. It was disapproved early in March.[10]

Curiously, a plan of the fort forwarded to Santa Fe in May showed the dividing walls behind the guardroom on a north-south axis instead of east-west, resulting in two long rooms instead of one large and one small room. All other buildings on the plan are accurately represented. No available documents indicate the wall was ever moved, so this was probably an error by the draftsman.[11]

Inspected on July 20, the overall measurements given for the guardhouse were 106 by 23 feet, thus including the north and south buildings as well as the sallyport. Condition of the two buildings was reported as "very poor." Under "remarks," a cryptic sentence was recorded: "Ventilation poor cells underground & unhealthy." In the "style" column, all buildings were described as "Mexican."[12]

During the year, a new flagpole was raised in front of the two enlisted men's quarters. This was accomplished after September 22, when authority was received to erect a new flagstaff as long as the cost did not exceed $150.00.[13]

In October, the post adjutant requested a lock be placed on the room next to the guardhouse to secure property for which he was responsible. This may have been the room used by the officer of the guard at the south end of the structure.[14]

Rumors of abandonment began floating about late in 1869. The Indians were relatively quiet, so maintaining Fort Craig was becoming a liability. Consequently funds were not allotted to the post for repairs. Desperate for flooring, the post quartermaster received permission in October to break up and use all the loose packing boxes around the grounds. A circular was issued from post headquarters warning people to put up their private crates lest the quartermaster haul them away. No specific reference is made to the make-do lumber ending up in the guardhouse, but it is an indication that material for repairs was in short supply.[15]

The state of the prisoners' accommodations came under fire again in a report published by the surgeon general in December 1870. According to the two doctors who collaborated on the account, the prison rooms were poorly lighted and ventilated by a few small openings near the ceiling and by chinks around the doors.

The room used for white prisoners was in the north building and was heated by a fireplace. The room in the center of the south building for Negro soldiers measured 20 by 21⅓ by 10½ feet high, with no provision for heat. The guardroom in front measured 20 by 17 feet. According to the physicians, there was no board flooring in any of the rooms, but obviously a wooden floor existed in the guardroom because of the trap door. Prisoners were forced to sleep on dirt floors that had to be sprinkled with water to keep the dust down, an indication that if the platforms requested in 1867 were built, they had fallen so far into disrepair they had been scrapped. Most men had only one blanket and often suffered from aches in the joints and colds.[16] Gone from the description was any reference to the room used by the officer of the guard, lending weight to the theory that it was the one for which the adjutant had wanted a lock the previous October.

The report's synopsis and recommendations remarked that "The underground cells at Fort Craig are probably the most discreditable example of prison construction found the Army."[17] More on the underground cells appeared in a letter written in April 1872 by the post surgeon, who stated that "The only supply of air to the whole is an opening under the door of the guardroom, two feet by seven inches, closed with seven slats, each two inches wide, leaving an an [*sic*] space of 70 square inches, or less than one half square foot." He noted that in five hours the air became "absolute poison" and the appearance of the prisoners was "unmistacable [*sic*] evidence of the deliterous [*sic*] effect of the impure air. . . ."[18]

Funds for repairs army-wide ran out in 1873, and no funds were available for fiscal year 1874. All construction was stopped and all civilians were discharged. There was no money to pay enlisted men for extra duty, so even they could not be used in this capacity.[19] But annual inspections were still required, and the report made on the last day of June 1873 noted that of the $1,000.00 allotted for the fiscal year ending June 30, $935.50 had been expended before April 15, when orders were received to stop all maintenance. The roof on the guardhouse was one of those repaired, but the walls inside and out were in bad condition and needed attention. Material was still on hand but would not cover all the needed repairs around the post.[20]

Estimates were forwarded for the fiscal year ending June 30, 1874, although there were no funds available. Had there been, getting them in hand would have been complicated by a flood on the Rio Grande that cut off many villages above Fort Craig. The quartermaster general was not about to consider spending money on a fort he suspected was in danger of being washed away, and three months' correspondence through channels was required to enlighten him.[21]

When money was again available, estimates included 125 bushels of lime to plaster the five rooms of the guardhouse "and Sally-port." A ground plan dated in 1873 shows but four rooms; however, it is possible the room in the north building had been divided. Wood flooring of one-inch lumber for three rooms measuring 20 by 20 feet each and twelve bushels of jaspe were also requested. The estimated cost came to $162.75. How much of this was approved is not known.[22]

The annual report for 1875 contains the continuing request for shingle roofs, a request which had also been made the year before. Also discussed were spouts to carry water off the flat roofs. Extreme summer heat tended to warp and shrink the existing wooden spouts, and the post quartermaster recommended ones of tin instead. Scheduled was the "rough casting" (plastering) of all the buildings with what he described as "a concrete consisting of lime and sand." He also referred to the new prison room of stone that had recently been added to the north structure.[23]

In 1875, the surgeon general published a report on the hygiene of the army. Part of the material on Fort Craig was drawn from the earlier report, but more was added about the south building at the sallyport. Evidently, at least part of the wooden floor requested two years before was not put down, for the new report stated the prison room floor was sprinkled often and was constantly damp. There were no facilities for sleeping other than on the ground. A wood-burning stove had been installed in the prison room since the previous report. Ventilation was described as two openings near the ceiling on the south side, 10 inches by 18 inches each, and the same number on the north side but only 3 by 6 inches each. One barred window let

in light and air. The description of the guardroom included the infamous dungeon, which was still considered available for use, though seldom used.[24]

No inspection report and no other information worthy of note exist for 1876. Some changes, however, were obviously made because the report for the following year states that a guardhouse with a stone prison room was in use; all guardhouse activities had been moved to the north side of the sallyport. An administration building consisting of four rooms used as offices for the commanding officer, adjutant, quartermaster, and subsistence officer replaced the original guardhouse in the south building. At the time the change was made, the underground cells were filled in, and even though the method of construction is not known it is tempting to speculate that evidence of them might still exist. The building still had a mud roof and was considered in good condition except for rain-damaged outer walls. The quartermaster recommended the gypsum (jaspe) floors be replaced with wood. He also stated no alterations had been made in the previous fiscal year, leading to the supposition that the change was made between June 30, 1875, and June 30, 1876.[25] The ground plan drawn in 1878 (Figure 9.1) shows no changes in the function of either building.

Indian depredations had saved the post from abandonment early in the decade, but all was quiet again. The last post return for this occupation was for August 1878.

Two years later, terrifying raids in southwestern New Mexico by the Apaches once again put troops in the field. Returns for Fort Craig resume in July 1880, but troops were at the site at least as early as May. In September, orders were received to put the buildings in condition for a company of infantry, but the post was not officially reestablished until the first of November. It was then garrisoned with a company of infantry and a troop of cavalry.[27]

Sashes and doors from the Fort Union (New Mexico) Depot were promised, but the buildings were in worse condition than that simple solution suggests. Doors and windows were almost entirely gone, spouts gone or ruined, coping was in poor condition and the walls under it badly washed or collapsed, and roofs were sagging dangerously. Funds totaling $958.00 were allotted for repairs and every dime of it spent. Still on the wish list were shingle roofs and board floors.[28]

In November 1881, estimates were made for shingle roofs for most of the buildings, including the guardhouse, presumably in the north building at the sallyport, and for wooden floors in the adjutant's office in the south structure. Offices for the quartermaster and subsistence officer were to be relocated in the rear of the fort. All outside walls were to be "restored" and rough cast, and all inside walls were scheduled for "smoothing" and a coat of calcimine; ceilings were to be "floored" out, lathed, and plastered; and all woodwork repaired. An endorsement the following April states that all the offices would be floored by the twelfth, so it would appear that the south building finally got wood floors.[29]

The post quartermaster's annual inspection made at the end of March 1882 does not show that much had been accomplished in restoring the buildings to a semblance of comfort and safety. No mention at all was made of the two-room adjutant's office in the south building.[30]

No changes were reported to the structure, then called the Office of the Commanding Officer, in 1883. The condition of the two-room building was noted as poor, and it still wore its mud roof. Nothing was said about the floor. Several repairs made during the fiscal year had amounted to the princely sum of $7.63. Wanted were a shingle roof and general repairs, estimated at $361.48.[31]

During the following year, both buildings at the front gate received shingle roofs. The roof of the commanding officer's office and general repairs had cost $71.96. Condition of the building was reported as fair. Material was on hand for a porch to be built with troop labor.[32]

In the early fall of 1884, it was known that Fort Craig would shortly be abandoned because events had passed it by. Even so, it was necessary to submit an inspection report, which was forwarded in April 1885. On the printed form, the adjutant's office (as the south building was called) was listed as being a two-room, one-story adobe building, 35 by 23 feet, a measurement that does not agree with earlier ones. Along with all

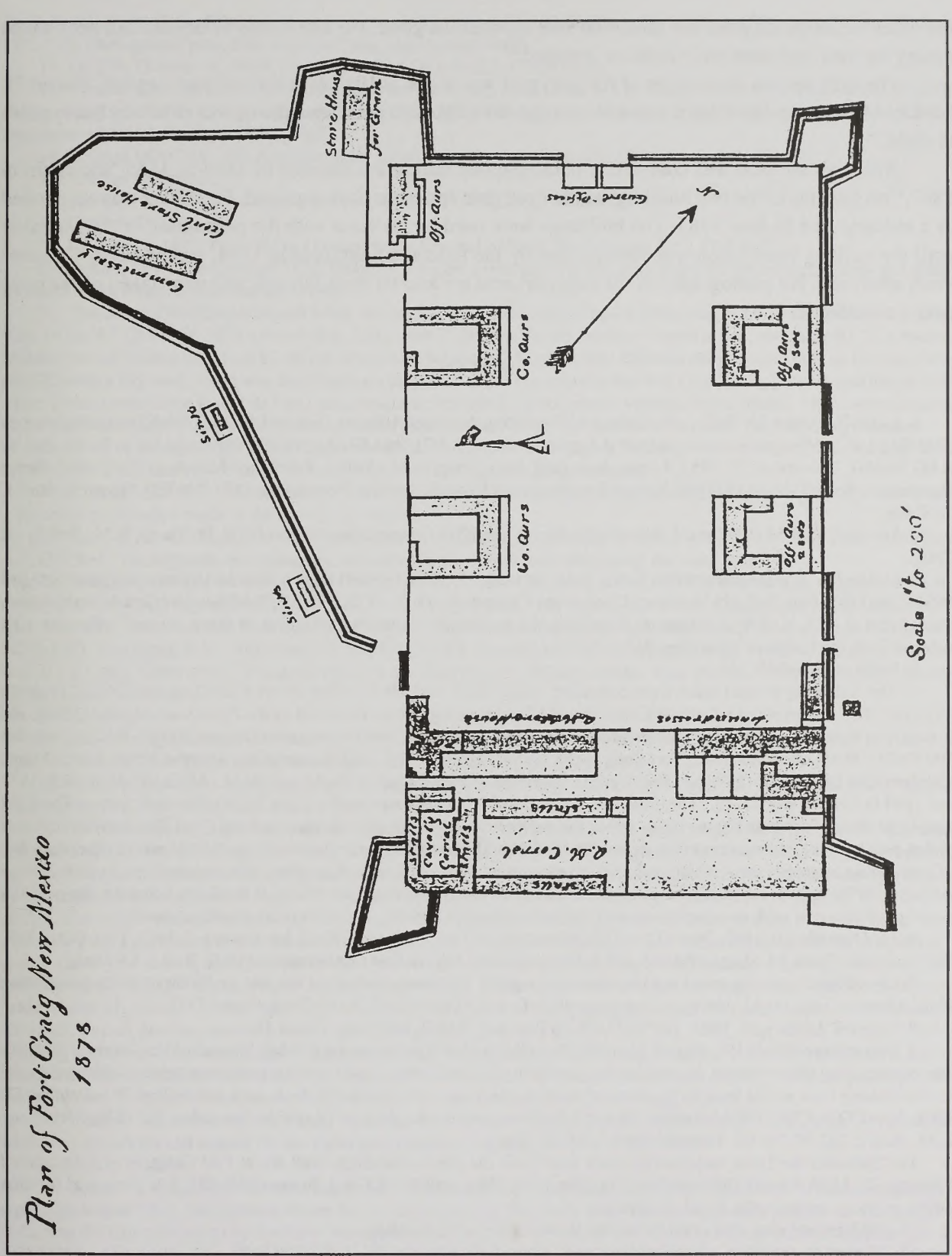


Figure 9.1. *1878 ground plan of Fort Craig (from Gerow 1988:31).*

the other buildings on post, the condition was reported as good. No alterations or repairs had been made during the year and none were listed as required.[33]

The only known description of the sallyport was made in 1918 by a former post surgeon, Robert H. McKay. He wrote in 1869 that it was wide enough for wagons to pass through and was closed by heavy gates at night.[34]

Although the post was completely photographed during the summer of 1864 or 1865, and again in 1867,[35] no pictures of the two buildings at the front gate appear to have survived. Fort Craig was abandoned as a military post in June 1885. The buildings were used by civilians with the permission of the caretaker until the military reservation was relinquished by the federal government in 1894, and probably for some years afterward. No photographs of the sallyport area are known from this era, and none taken of the ruins have yet surfaced. ✠

NOTES

1. Letter [Ltr] June 23, 1853, ?, Ft. Conrad, to the Acting Assistant Adjutant General [AAAG], 9th Military Department [9thMD]; Ltr ?, Albuquerque, to Assistant Adjutant General [AAG], 9thMD, August 23, 1853; and Ltr ?, Ft. Conrad, to AAG 9thMD, November 15, 1853, Letters Sent [LS], Fort Craig, N.M., Roll 1, February 1852–August 16, 1864, Army Commands, Record Group [RG] 98, National Archives and Records Service, Washington, D.C. [NARS]. Hereafter, Roll 1, LS Craig.

2. Ltr April 4, 1854, ?, "Camp 8 miles below Fort Conrad," to Commanding Officer [CO], Ft. Thorn, N.M., Roll 1, LS Craig.

3. Orders No. 2, Headquarters Fort Craig, N.M., January 15, 1855, General Orders, Special Orders and Circulars, April 1854–June 1885, Fort Craig, N.M., Army Continental Commands, 1821–1920, RG 393, NARS, microfilmed for the writer. Hereafter, RG 393, NARS. A statement approving the results of a court-martial refers to three "ironed" prisoners who escaped from the "prisoner's [*sic*] tent."

4. Billings 1870:245–246.

5. The following ground plans were consulted: 1854, 1865, and 1866, Office of the Chief Engineer, RG 77, NARS; 1873 and 1883, Quartermaster General Consolidated File containing Letters Received by the Post Quartermaster (1882), and Letters Sent by the Ft. Marcy Post Quartermaster (1865–1867), Office of the Quartermaster General, RG 92, NARS (hereafter QM Roll); 1868, Letters Received, Fort Craig, N.M., 1854–1885, RG 393, NARS, microfilmed for the writer, Roll 3, Frame 330 (hereafter LR Craig); 1869 and 1882, Cemeterial File, Report and Maps of Fort Craig, N.M., AGO, RG 94, NARS; 1878 and 1884 in Gerow1988:31, 32. (The latter two are National Archives maps on file at the BLM office in Socorro.) The 1854 plan [reproduced herein as Figure 10.2], which the writer believes is the original plan with the Civil War fortifications and picket-post buildings superimposed on it, and the 1866 plan [Figure 10.4] assign no functions to these rooms other than that of guardhouse or guardrooms, which included the structur'e on the north side of the front gate. Separating the two buildings in the pre-1870s records is virtually impossible because they were considered one facility. It should be noted that the post was not aligned on a true grid, so using the cardinal points to describe building locations is not strictly accurate.

6. Ltr December 9, 1862, Post CO to CO Department of New Mexico [DNM]; Ltr January 2, 1863, Post CO to U.S. District Judge, Santa Fe, ; September 13, 1863, Post Adjutant [Adj] to Post Quartermaster [QM], Roll 1, LS Craig.

7. One of two surviving guard reports states that a guard was posted on top, at the rear, and in front of the guardhouse (Guard Report, May 14–15, 1865, on loose page 490 of a bound book, Roll 2, LR Craig, Frame 247).

8. Surgeon, January 10, 1867, 125th U.S.C.T. to Post Adj, Roll 2, LR Craig, Frame 532.

9. Endorsement [End] 359, August 21, 1868, Post QM to Chief Quartermaster [CQM], District of New Mexico [DiNM]. The commanding officer was of the opinion the condition of the buildings would not "warrant the expense of shingled roofs" as the existing ones would have to be removed because the vigas were weak and the boards rotten (End 401, October 13, 1868, Post CO to CQM DiNM, Letters Sent and Endorsement Books, August 17, 1864– December 29, 1870, Fort Craig, N.M., Roll 2, RG 98, NARS. Hereafter Roll 2, LSEB Craig).

10. "Estimate for Lime, required to repair and finish the public buildings, wall &c at Fort Craig, N.M.," forwarded February 22, 1869, AAAG DiNM to Post CO, March 10, 1869, Roll 3, LR Craig, Frames 558–587. The price paid for lime on the previous contract was $1.44 per fanega.

11. 1868 ground plan. Only two rooms are shown in the north building.

12. "Report on condition of the buildings at Ft. Craig Letter of July 20, 1869," QM Roll.

13. End 792, September 10, 1869, CQM DiNM to Post QM, received at Fort Craig ca. September 22, Roll 2, LSEB Craig. Col. August V. Kautz, Fifteenth Infantry, the new post commander, arrived June 29 and possibly recorded the flagstaff in the new location. However, the military reservation was surveyed by Capt. John Rziha, Thirty-seventh Infantry, between

April 21 and June 21, and the resulting map shows the pole in its original location in front of the guardhouse (Wallace 1975:235; 1869 ground plan; Post Returns Craig, April–June 1869).

14. Ltr 359, October 18, 1869, Post Adj to Post QM, Roll 2, LSEB Craig.

15. Circular Ltr, October 4, 1869, Headquarters Ft. Craig, N.M., Roll 3, LR Craig, Frame 500. Word about possible abandonment reached Ft. Craig in December (End 942 of CQM Department of the Missouri, Ft. Leavenworth, Kan. [DMo], December 18, 1869, Roll 2, LSEB Craig).

16. Billings 1870:245–246. Airspace in the north building was given as 2,226 cubic feet (1870:245).

17. Billings 1870:xviii.

18. Ltr April 2, 1872, AA Surgeon to Post Adj, Roll 4, LR Craig, Frames 72–73.

19. Clary 1984:110.

20. Ltr July 11, 1873, Post QM to Quartermaster General [QMG], Washington, D.C., QM Roll.

21. Passim, July 1873–October 1874, QM Roll. Chrome green paint was requisitioned for use on certain trim and gates; it is not known if the request was approved.

22. "Estimate of Building Material labor, &c for repair of Public Buildings at Fort Craig N.M. in the fiscal year ending June 30 1874," QM Roll; 1873 ground plan. Lime cost 75 cents a bushel, lumber 4 cents a foot, and jaspe $1.75 a bushel. Masons were available for hire at $2.20 per day and carpenters at 35 cents a day. Enlisted men on extra duty as laborers were paid 20 cents a day each. Jaspe was described as a substance similar to gypsum that was fired, finely ground, and mixed with water. It was a workhorse in and on Fort Craig structures, though it did not always yield desirable results. There are references in the post documents to jaspe mines in the vicinity. Requisitions in the 1880s refer to concrete for plastering purposes.

23. "Case of Annual Report of Lt Kinzie on condition of public buildings at Ft Craig NM—new floors &c needed," July 4, 1875, QM Roll. The report for 1874 is missing; the 1875 report is just an extract.

24. Billings 1875:251. The reference to north and south is somewhat puzzling, but what is commonly called west on-site is assumed to be called north in the report; see note 5.

25. "Case of Annual Report on Condition of public buildings at Fort Craig NM. . . .," Ltr July 21, 1877, Post QM to Post Adj, QM Roll. The adjutant, quartermaster, and subsistence officer were frequently the same man.

27. Telegram, CO DiNM to ? at Fort Craig, May 27, 1880, QM Roll; AAAG DiNM to Post CO, August 26, 1880, received at Fort Craig September 7, 1880, Roll 5, LR Craig, Frame 757; End (n. n.) of Post CO December 15, 1880, on Ltr from Post QM, n.d.; End 345 Post QM to ?, May 26, 1881 (hereafter End 345), Letters Sent, Endorsements, Telegrams, 1870–1885, Fort Craig, N.M., Rolls I and III, RG 393, NARS, microfilmed for the writer, Roll III, Frames 129, 281. Hereafter Roll I, LS Craig. Company C, Fifteenth Infantry and Company D, Ninth Cavalry were the two companies (Post Returns Craig, December 1880).

28. End 345.

29. Copy of original estimates made by CQM DiNM, November 9, 1881, Roll I, LS Craig, Frame 591; End of Post CO, April 9, 1882, on Post QM to QMG, Washington, D.C., March 31, 1882, QM Roll.

30. "Case of report on condition of public buildings at Fort Craig, N.M.," Ltr March 31, 1882, Post QM to QMG, Washington, D.C., QM Roll; 1882 ground plan.

31. "Submits annual Inspection Report of public buildings and transmits Estimates and Plans for Repairs of Barracks and Quarters and New buildings," Ltr April 12, 1883, Post QM to QMG, Washington, D.C., QM Roll; 1883 ground plan.

32. Materials required for shingling the roofs of buildings and porches were consistent: for plates, 2 inches by 6 inches by 20 feet; rafters, 2 inches by 4 inches by 16 feet; roof boards, 1 inch by 6 inches by 16 feet; stock, 1 inch by 12 inches by 16 feet. Cut nails were ordered in sizes 4d, 10d, and 30d. Shingles cost $5.00 per thousand, but there is no information on where they were purchased and no measurements are given ("Estimate of Material and Labor required and the cost thereof, during fiscal year ending June 30, 1885," for two sets of officers' quarters, one set of enlisted men's quarters, and one building containing QM shops, library and telegraph office; "Makes report of the Annual Inspection of public Buildings, made March 31, 1884. . . .," Ltr April 12, 1884, QM Roll). None of the ground plans show a porch on the south structure. However, not all porches were shown on the 1854 ground plan: see Ltr 90, June 26, 1868, Post CO to AAAG DiNM, referring to porches cut down for fuel by Kit Carson when he commanded Fort Craig for a short period in 1862, Roll 2, LSEB Craig, and "Special Estimate for lumber to repair public buildings Fort Craig N.M.," dated July 20, 1868, requesting 6,000 feet of lumber to replace portals at the hospital and officers' quarters, Roll 3, LR Craig, Frames 20–24.

33. "Annual Inspection report, Public buildings Fort Craig, N.M. on the 31 day of March 1885., with estimates for additions, alterations and repairs for the fiscal year commencing July 1st 188-.," QM Roll.

34. McKay1918:26.

35. George A. Gaige worked under a contract with the chief quartermaster of the District of New Mexico, supposedly signed in August 1865, but General Order No. 3, dated January 21, 1864, from the quartermaster general in Washington, D.C., was the date referred to by the Fort Craig quartermaster in 1878 (Rudisill1973:28; Ltr February 28, 1878, Post QM to CQM DMo, QM Roll). The other photographer was William A. Bell, who accompanied a railroad survey through New Mexico (Bell1965:245–247).

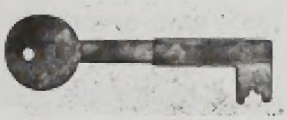


Figure 10.1. *Circa 1866 photograph of the soldiers' quarters (courtesy of National Archives, neg no. 87960).*

Chapter 10

THE WEST ENLISTED MEN'S QUARTERS & POST BAKERY

Marion Cox Grinstead



AFTER AN ARDUOUS MIDWINTER CAMPAIGN to the White Mountains in south-central New Mexico in 1854, Fort Conrad troops began the construction of a new post at a site previously selected, about eight miles south of the rapidly deteriorating Conrad.[1]

The Fort Conrad Post Returns show several enlisted men on daily or extra duty in January 1854, but they do not specify whether they were at the old fort or the new site downriver. Thirty-two men were absent on detached service, and one officer was absent with a timber party. The following month, the 32 men were still on detached service, and a second lieutenant had been absent since February 7 with a timber party. His orders were verbal, so no written order existed that would provide further details. The site of the timber camp was not noted, but it may well have been in the mountains west of the Rio Grande where much of the timber used in later years at Fort Craig was cut. The timber party was undoubtedly cutting logs for use as vigas at the new post. Whether or not construction had advanced to the point of immediately requiring any of the logs is not known, but it seems unlikely that the walls had reached the roofing stage in so short a time.

The second lieutenant returned from detached service (presumably with the timber party) on March 30, 1854. Twenty-five enlisted men remained absent, probably working at the new site.[2] On the following day, Company K of the Second Dragoons and Company I of the Third Infantry marched the approximately eight miles to the new site, situated on a high bluff on the west bank of the Rio Grande, and established Fort Craig.[3]

Records concerned with the first six years of Fort Craig are so sparse that it cannot be determined how much progress in construction had been accomplished by the time the permanent garrison arrived. Reference to a fight on April 9 in the mess tent of Company K indicates that they still did not have a completed dining room in their quarters.[4]

OVERVIEW

Fort Craig is usually described as a two-company post, and twin sets of enlisted quarters were originally built. The buildings were built of adobe in the Mexican style, as it was called by the post quartermasters—that is, of adobe bricks and with flat roofs (Figure 10.1). The roofs were built by spanning the rooms with vigas, overlaid at right angles with saplings, earth, and a layer of jaspe, a local gypsum mined in the mountains southeast of the site. As noted in the previous chapter, drain spouts were supposed to carry water off the

roofs but often did not work properly and created other problems. Porches with jaspe floors extended the width of the buildings on the north side.

Building maintenance records are numerous if somewhat scattered in the early years, but they do not refer to a particular building. Worse yet, even after 1868 when identification of the buildings becomes possible, at least one post quartermaster referred to the "upper" and "lower" enlisted quarters. In the lower set, the outer walls of the end rooms of the two ells were separating from the main walls and had to be propped up. The floors were of jaspe, and the roof was undergoing repair. The upper quarters also had jaspe floors, and the walls were sufficiently rain damaged to warrant comment. Ceilings in the kitchen and dining room were so weak that they had to be supported by poles, but the quartermaster considered the squad rooms to be in "fair order." There seems to be no way to resolve which was the east set and which was the west.[5]

In 1869 each building was 120 by 142 feet with placitas (courtyards) measuring 72 by 82 feet. Two hundred men could be quartered in the two buildings with room for 250 more in the placitas if necessary. Four years later, the dimensions of 150-foot fronts with two wings each of 130 by 20 feet were given. The annual inspection made on March 31, 1885, gave overall dimensions of 250 by 24 feet, but how the quartermaster arrived at those figures is a mystery.[6]

Two squad rooms separated by a wide hall faced north, each dormitory measuring 51 feet east-west by 20 feet north-south. Ceilings were 12⅔ feet high. In 1884, it was reported that each room would hold 28 iron bunks. Allowing 3½ by 7 feet for each bunk, that left 1 foot between bunks and an aisle 6 feet wide through the center of each room. The quartermaster stated that no allowance had been made for windows—two in front and one at the end of each squad room—nor did he mention the large fireplaces used for heating.[7]

Two wings extended from the rear of the squad rooms, making the building U-shaped. These rooms were used for dining facilities, kitchens, company storerooms, and for fuel, limited amounts of subsistence, and ordnance storage. In 1874, company laundresses had quarters in the back rooms of the ells. Classes in tactical instruction for noncommissioned officers and certain enlisted men were held in each company between January 6 and February 23, 1883, probably in a room in one of the ells associated with the respective companies.[8]

Ventilation in the barracks was always considered poor, and proper heating was next to impossible. Nevertheless, one soldier wrote during the Civil War that "we have good warm comfortable quarters to live in."[9] Whether his quarters were being heated by the fireplace or by a stove is problematical because the date stoves arrived at Fort Craig is not known. Reference to heating stoves is found in a report written in November 1876, but these were not in the barracks proper. Cooking stoves were mentioned in January 1865, and the 1875 report by the post surgeons noted that both stoves and fireplaces were used in meal preparation.

Iron cots were referred to in November 1864; however, during the previous June, hammocks were also in use. One of the seemingly insurmountable problems in the enlisted men's quarters was bedbugs. They collected and multiplied at an astounding rate, and the problem was so severe that the men frequently resorted to sleeping in the placitas to escape the pests. Mosquitoes also were evidently legion because two documents refer to mosquito bars.[10]

There are many references in the records to furniture such as gun racks, benches, chairs, tables, and lockers. Among the more interesting items mentioned were sand-filled spit boxes and "trestles," which the men burned, apparently for fuel, in December 1855.[11]

Originally the "sinks" (latrines) must have been located outside the post wall. The 1854 ground plan (Figure 10.2) shows them outside the fortifications, which did not exist until midway through the Civil War. Selecting a location for these necessary buildings and getting them built occupied a great deal of the early post commander's time. An order in June 1864 directed that sinks be built outside (and not less than 150 feet from) the fortifications. Two reports written in 1869 and 1874 by the post surgeons stated the sinks were 200 yards from the enlisted men's quarters. If that figure is correct the sinks would have been where the modern road from the highway approaches the ruins. Documents recommending their removal to outside the

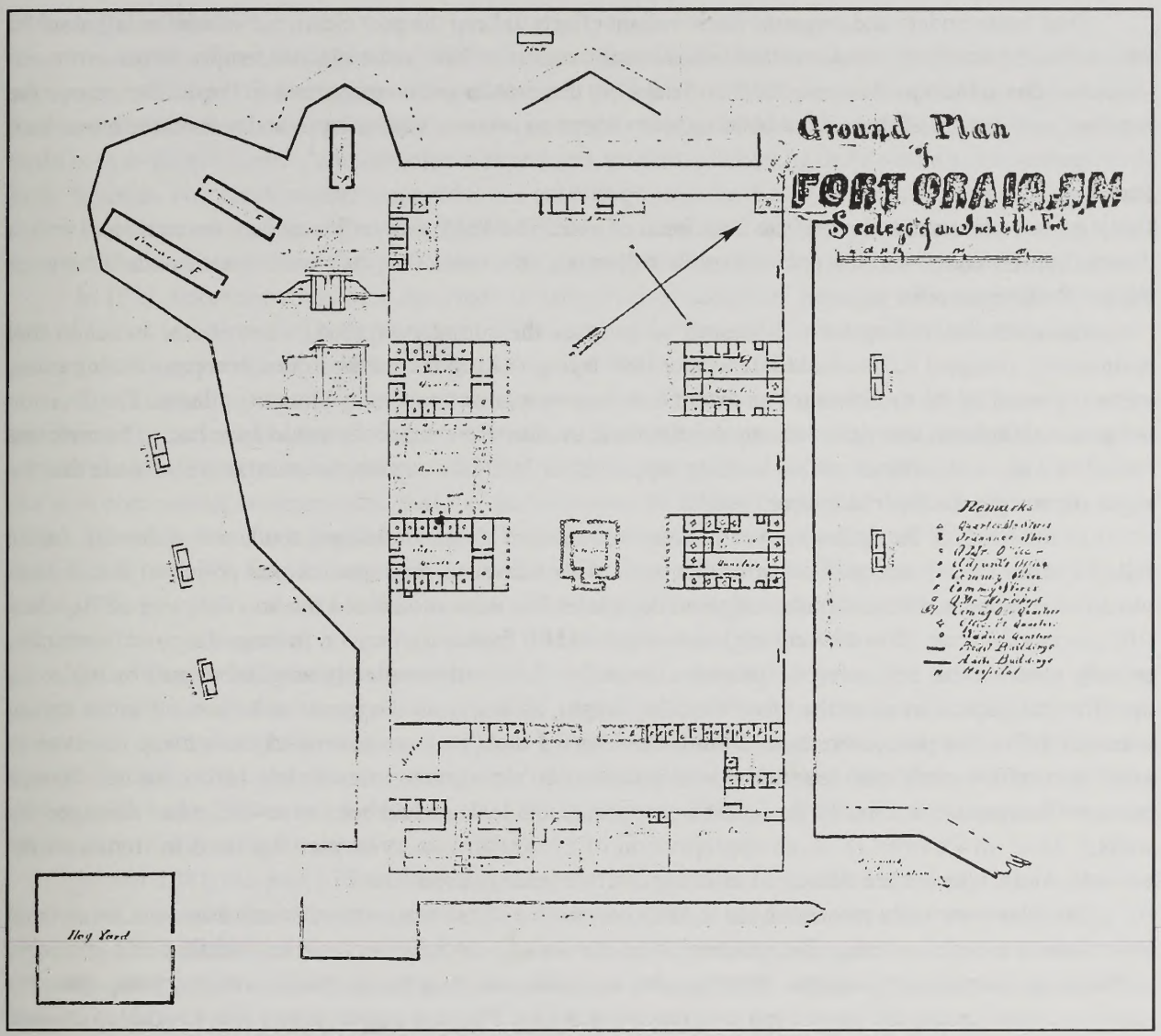


Figure 10.2. *1854 plan of Fort Craig (which includes Civil War–era structures; Office of the Chief Engineer, RG 77, NARS).*

entrenchments in 1876 and 1877 indicate the latrines had been brought inside the walls. When the post was reoccupied in 1880, one of the first items of construction attended to was the sinks. They were covered, the pits were walled, and the post commander, speaking from past experience, thought they were the best that had ever been built at Fort Craig. The commander who followed was not as sure because the one for the west barracks was within 100 yards of his dining room.[12]

By the 1880s, the original, low post wall that ran east and west along the rear of the barracks was no longer drawn on the ground plans. It had been in a rapidly deteriorating condition prior to the abandonment of Fort Craig in 1878, and whatever remnants existed were probably eliminated in 1880 when the post was reoccupied.

Despite on-site evidence to the contrary, no fires were mentioned in the available documents for either set of quarters. There was, however, a General Order published in April 1865 directing the combustibles from the placitas and the straw from bed sacks be taken to any one of the several holes in the ditch outside the walls, thrown in, and covered with dirt. The order might have been prompted by a fire; attention to the disposal of flammables was infrequent.[13]

Post commanders and surgeons made valiant efforts to keep the post clean, but sanitation left much to be desired, especially by modern standards. Manure, excessive dirt in the placitas, empty boxes, worn-out shoes and dirt in the squad rooms, "filth and slops" in the kitchen and laundry, trash in the ditches around the quarters, and discarded straw from bedding were common sanitary violations in and around the barracks.[14]

Roofing

Early ground plans show the roofs to have been of mud. The 1865 plan indicates they were covered with a 3-inch "plaster coat," and the one drawn the following year notes that they were coated with "Plaster of Paris." Both terms refer to jaspe.

Shingles for roofing were discussed as early as the summer of 1868, when it was believed that maintaining shingled roofs would be cheaper than trying to keep the earthen ones in repair. During rains, water collected on the roofs to such an extent that there was great concern they might collapse. The decision not to use shingles at that time was apparently made because the mud roofs would have had to be removed first. The walls were considered too weak to support both. In the discussion, the point was also made that the vigas supporting the dirt roofs were rotten.[15]

In February of the following year, extensive repair of all the buildings' roofs was underway. In the fall, a civilian mason was still covering the roofs with a layer of jaspe, and it was projected that the job would take the mason three months longer to complete. The work did indeed run into February 1870, when fifty pieces of timber, 20 to 40 feet long, were requested for further roof repair. In June, the post commander proudly reported that beginning the previous December 1, he had completely rebuilt the roofs by replacing the dirt with jaspe. But all of the labor went for naught, as nearly all the jaspe roofs blew off in the spring winds of 1871. The post commander admitted on April 1 that "they are now utterly worthless, not even as good as common earth" and reported it was necessary to repair them immediately before further damage occurred from summer rains. In the fall, it was reported that leakage had been so severe, it had damaged the walls.[16] Thus, in October 1872, an appropriation of $1,000.00 was to be partially used for repair of the barracks roofs, which were described as being in a "very leaky condition."[17]

Shingles were again recommended in 1875 because locally severe summer rains washed out the dirt and jaspe was not a useful covering. Tin spouts in place of wooden ones were suggested as a method of minimizing wall damage from leaking spouts. Wood tended to shrink and warp in the intense summer heat, allowing runoff to creep beneath the plaster and melt the adobe bricks. The post quartermaster was directed to provide an estimate, but evidently nothing came of it because the recommendation was made again in 1877.[18]

When the post was formally reoccupied in the winter of 1880, many of the buildings were in a state of imminent collapse. Roofs were described as "badly washed," and some had fallen in. The post commander recommended shingles if the post was to be permanently garrisoned.

As much as possible was done to make the troops comfortable during the hard winter that followed. Still, in May of the next year, one set of enlisted men's quarters needed a new roof in the dining room as well as in another, unspecified room. The other set required a new roof in the dining room, kitchen, and a storeroom because the vigas were broken and the boards rotten. Nine months later, the barracks were reported to be comfortable.[19]

Roof timbers in both barracks were reported to be broken and supported by poles in the annual report of 1882, and shingled roofs were recommended and estimates once again provided. However, the next post commander wanted no action taken on the estimate because he believed shingles would cost more than the total amount allowed for post repairs. Instead, he advocated using corrugated iron, but it appears that only the officers' quarters were actually roofed with that material.[20]

Reference was again made to rotten roof timbers in the annual inspections in March 1883 and March 1884. Shingles were once more recommended if the post was to be retained.[21]

Flooring and Walls

Two masons were hired in November 1867 to lay new floors as the old ones were considered "unfit for the occupancy of troops." Squad rooms were refloored in the fall of 1869 despite the fact that specific authority to do so had not been granted by the chief quartermaster of the District of New Mexico. His instructions had been to do both roofs and floors if enough jaspe was on hand, evidently believing there would not be enough to do both. When the post quartermaster managed to eke out both projects the district quartermaster sounded annoyed. A few days later, using "plank" was suggested if it was on hand, and the post quartermaster went on a hunt for loose packing boxes. How many floors actually received wooden flooring at this time remains unknown.[22]

In 1873, floors and roofs were described as being in good condition. Even so, it was estimated that 500 feet of 1-inch lumber would be required to finish repairing the floors. Estimates made for necessary repairs in the following fiscal year included 3,000 adobes and 530 bushels of lime as well.[23]

The following year, the post quartermaster reported the enlisted quarters to be in "a very shabby condition." Little could be done to improve them because funds for repairs had gotten tangled up in lengthy, sometimes bewildered correspondence with the quartermaster general in Washington, D.C. In November, the post commander recommended that the quartermaster be allowed to buy 15 bushels of jaspe to repair floors. Permission was not granted. The post quartermaster stated in the summer of 1875 that most floors were still of jaspe. He found it impossible to repair the honeycombed floors by applying a fresh coat of jaspe because the new layer would not flow into the cracks to seal them. Wooden floors were recommended as a solution. The post surgeons, however, reported that the kitchens of the quarters were well floored.

Even though the quartermaster was asked to furnish a detailed estimate for wood floors, nothing seems to have come of it. A report made in 1877 complained of "broken, crumbled and defective" jaspe floors in all quarters. In the continuing struggle to get the barracks refloored with wood, it was recommended that 22,000 feet of 1¼-inch flooring along with 7,392 feet of lumber for joists measuring 22 feet by 3 by 4 inches be furnished.[24] Records for the balance of the first occupation are so sparse that it is impossible to say how much, if any, of the lumber was received.

In mid-1881, the post commander suggested that wood floors be installed if the post was to become permanent. Not until the end of the year did he submit an estimate of 35,000 feet of lumber for flooring. By February 1882, 22,000 feet had been delivered, and two men from each company, who were on daily duty flooring quarters, were relieved. Late in March, the post quartermaster reported that all quarters would be floored by April 12.[25]

As might be expected, window breakage was annoyingly frequent. One dozen sashes with the dimensions of 30 by 32 inches were ordered in December 1867. Glass to fit those sashes measured 8 by 10 inches.[26]

One lumber requisition of interest was 200 feet for "coursing," which was made in December 1864. Six years later, the post commander asked for permission to plaster the coping with a thin layer of mortar colored with lampblack, which would have resulted in a blue-gray tint. The records do not disclose the outcome.[27]

THE WEST ENLISTED MEN'S QUARTERS

The 1854 ground plan for this building shows five rooms in the west ell, with an additional room on the south side of the placita abutting the southernmost room, making a second small ell. That room is missing from the 1865 plan (Figure 10.3) but is shown on the 1866 drawing (Figure 10.4) as having been divided into two rooms. It disappears from the 1873 plan, appears once more in 1875, and was not represented in 1878. The room is not shown on the ground plans drawn in the 1880s (Figure 10.5). In the main part of the ell, the room nearest the squad room lost a dividing wall according to the 1865 plan, although it was shown in 1866. Four rooms were again drawn in 1873 and were shown consistently through the 1880s.[28]

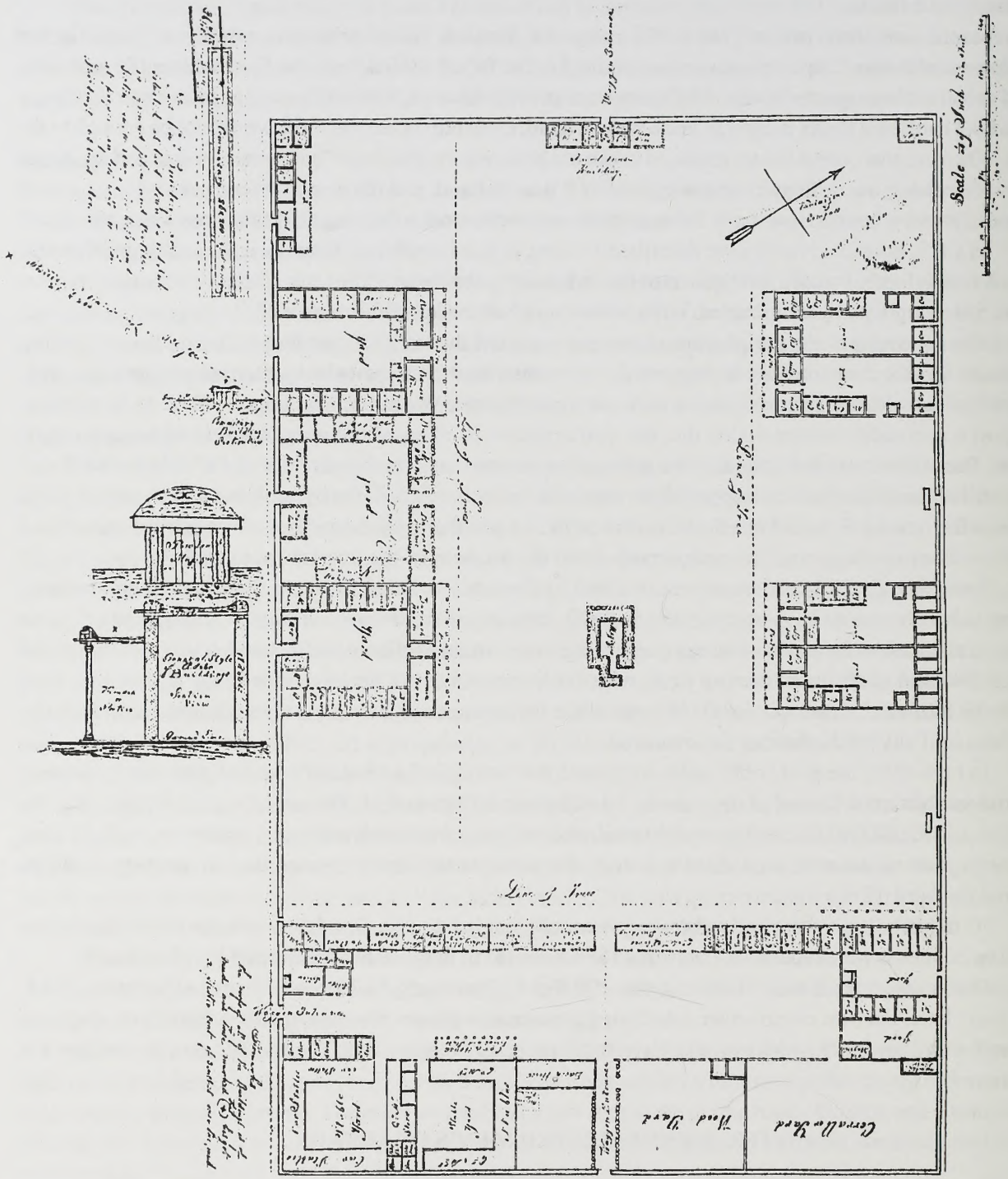


Figure 10.3. *1865 plan of Fort Craig (Office of the Chief Engineer, RG 77, NARS).*

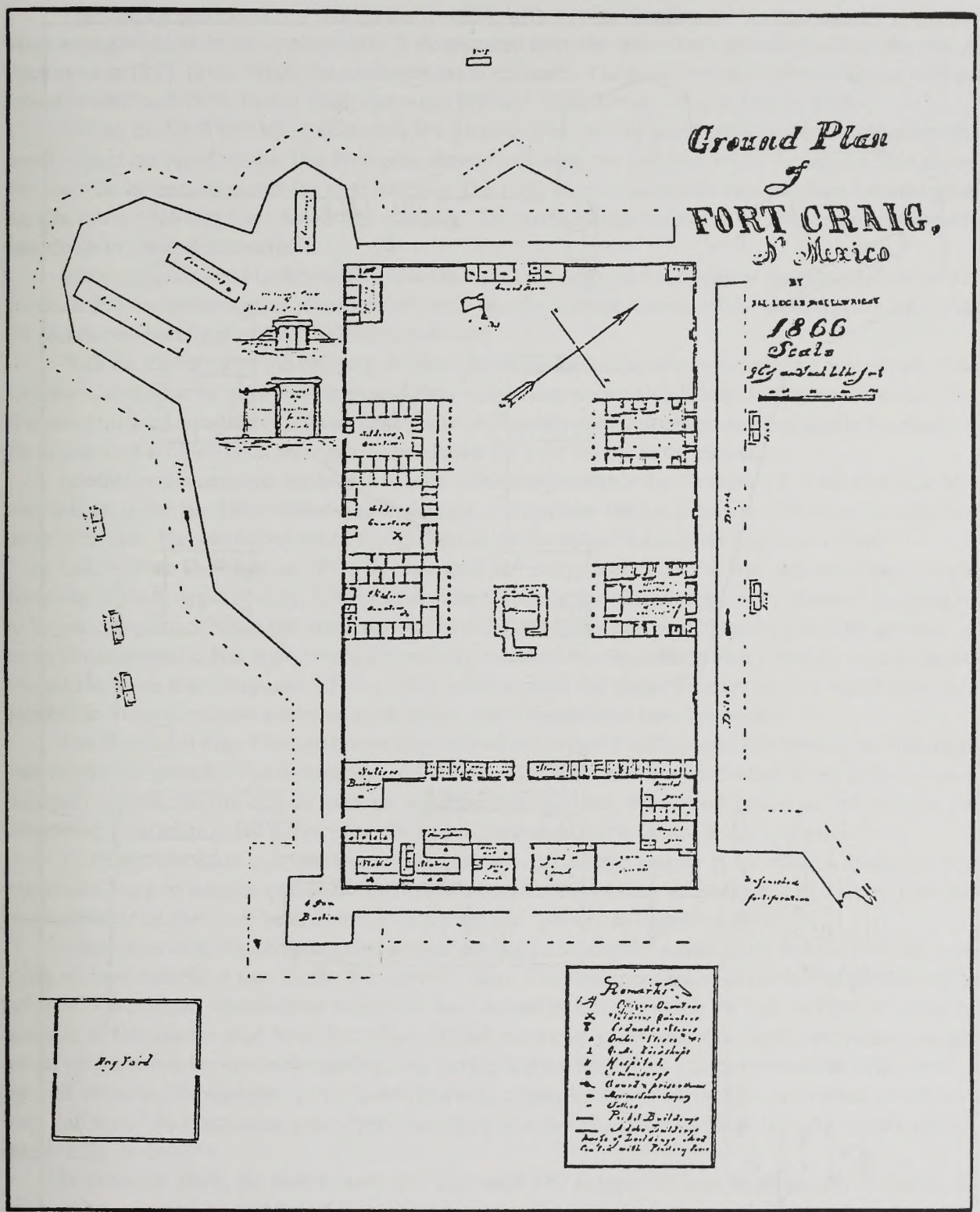


Figure 10.4. *1866 plan of Fort Craig (Office of the Chief Engineer, RG 77, NARS).*

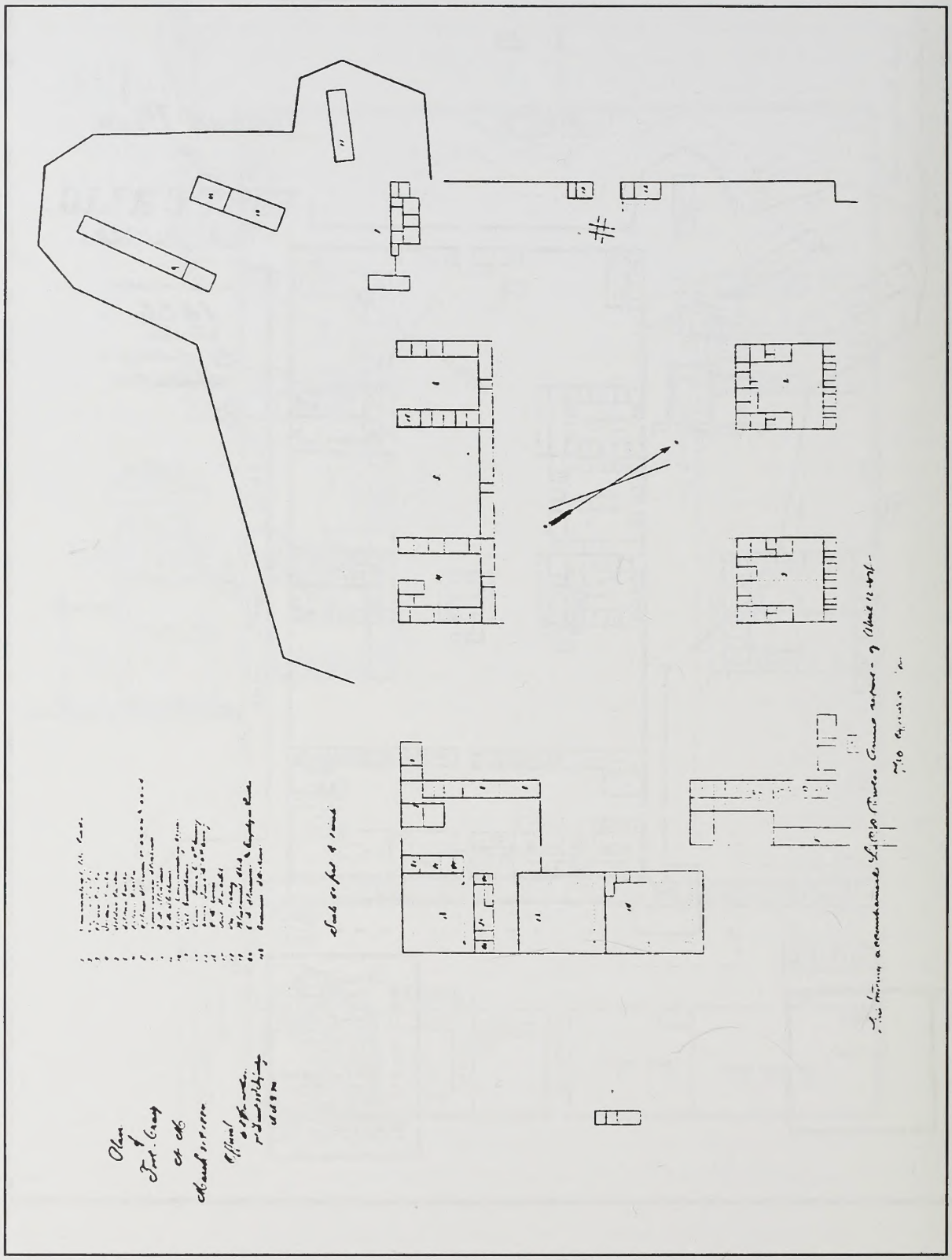


Figure 10.5. *1884 plan of Fort Craig (from Gerow 1988:32).*

The east ell also contained five rooms in 1854, with a room abutting the southernmost room in the same arrangement as on the opposite side. It disappeared from the three 1860s ground plans but showed up once more in 1873. In the 1880s, the room was not in existence. The main part of the ell was shown with six rooms in 1865 and 1866, five in 1868, seven in 1873 and 1882, five in 1883, and six in 1884.

During the Civil War when space was at a premium, two picket-post buildings were built against the south wall of the squad rooms. The 1865 plan shows two rooms per building, while the one for 1866 shows one room in the east and two in the west building. The 1865 drawing shows the two buildings butted against the ells, but in 1866 they were drawn free-standing. The two buildings were gone by 1873 and were probably torn down in 1868, if not earlier.

The conclusion must be that walls in the ells were either moved frequently or the ground plans are not accurate. Further archeological investigation could resolve the inaccuracies of the ground plans and locate the picket-post buildings of the Civil War era as well.

With the exception of the company kitchen shown in the southernmost room of the east ell, all of the rooms are labeled on the three earliest ground plans as quarters, an oversimplification because of the functions discussed earlier. Unfortunately, those three plans are the only ones that assign any function to the rooms in the ells, except for the 1880s drawings, which locate the post bakery in the east ell.

Internal evidence makes it possible to state with some assurance that Company B of the Third Cavalry used this set in the late 1860s. Quartered with them in December 1866 and January 1867 was the company tailor, a civilian. He was forced out of the quarters in the middle of January on suspicion of theft.[29]

Col. William B. Hazen, an officer of some note and energy from the Civil War, arrived at Fort Craig in the spring of 1868. Appalled at the deterioration of the buildings, and with the approval of district headquarters, he began a program of repair and construction that did much to raise the post "literally out of the ground," as he vividly expressed it. Hazen also made the puzzling statement that the enlisted men's quarters were originally intended to house four companies. If two-tiered bunks or beds that slept two were used, it would have been possible to fit two companies into the squad room, but it would have been cramped.[30]

The first day of May 1868, all troops were moved out of their buildings and into tents in order to repair their respective barracks. The commander of Company B, Third Cavalry was directed to put all his men not engaged on some specific duty to work on repairing their quarters. What work was done and when it was completed is not known, but the fact that the men were moved out indicates it was extensive.[31]

Three months later, a severe rain on August 7–8 left a large puddle in the placita. Based on past experience, the post surgeon guessed it would take about ten days to dry out because there was no drainage. He suggested that the water be drained off to prevent the "growth of organic bodies."[32]

A few days later, the company commander reported a leak under a roof spout that the men had been trying without success to stop for the previous five days. The downpour had also caused the placita wall to collapse. The company commander requested that a mason be hired to repair the leak and that prisoners be assigned to remove the mud from the collapsed wall and build a new one. The post commander, though, would only approve the mason for roof repairs, stating that the men of the company would have to attend to the wall. Bristling, the company commander fired back a reply that he had just eight overworked privates for duty, and since "To exact more work from them I simply consider a crime of which to make myself guilty, I respectfully decline."[33]

In February 1869, the post commander requested 185 fanegas of lime to plaster the barracks. To justify the requisition, he said the adobe walls were old and damaged by exposure to the weather and would deteriorate further without protection. Since the roofs were to be redone, it seemed like an opportune time to take care of the walls. The outcome of his request is missing from the files.[34]

Company B, Third Cavalry departed Fort Craig on April 3, 1869, for other duty and was replaced by Company E of the same regiment on April 22. Less than a year later, Company E left Fort Craig. About a

week later, it was noted that the barracks were in need of thorough repair before being reoccupied. Roof repairs were already underway, but they would probably not be finished by the first of May.[35]

No provision for draining the placita had ever been made, and in April 1874, the post surgeon made the obvious recommendation that a drain be dug from the center of the yard to remove the runoff. This was not done until October 1875, when the company commander of Company B, Fifteenth Infantry had an open drain installed.[36]

An unavailable report made by the post surgeon that same October ruffled the feathers of the post adjutant, who fumed that the company pigpen was 125 yards from the kitchen, 150 yards from the nearest squad room, and 290 yards from the nearest set of officers' quarters. The adjutant went on to say that the post commander's quarters were nearest the pigpen, and he was offended. And further, there were not enough men to move the pen at the time. If these distances are correct, the offending pigpen would have been well outside the walls.[37] Further information about the west quarters during the first occupation is lacking.

About a year after the post was reoccupied, the building was in use by Company M, Fourth Cavalry. At that time, the chief quartermaster of the district requested that estimates be made for shingles, flooring, and the construction of a frame porch 8 feet wide, with four-by-four posts and a shingle roof.[38]

In December, the commander of Troop M requested that missing doors and windows be replaced in his company quarters and that other necessary repairs be done in order to make the building habitable during the winter. As was often the case, the post quartermaster advised him that neither funds nor materials were available with the exception of a small quantity of window glass and sash and a few doors. What could be done with the scant materials on hand would have to be done by the troop because the quartermaster had no men to do the work.[39]

The annual inspection made by the quartermaster at the end of March 1882 reported that many of the timbers supporting the roof of the west building were broken and propped up with poles. Also noted was the fact that the building had been "fully floored" during the past fiscal year.[40]

When the annual report was made the following March, the roof was still of mud. General repairs totaling $64.69 had been made in the past year. The post quartermaster estimated $2,480.08 in repairs would be required to place the building in good condition. Included in the estimate were a new porch and a hopeful request for a shingle roof over the entire building.

Speaking generally of all the mud roofs at the post, the quartermaster was of the opinion that they could be put in fair condition by removing a quantity of mud equal to the weight of a new shingle roof. By leaving part of the mud in place to act as insulation, the rooms would still remain pleasantly cool during the extreme summer heat. He reinforced his recommendation by saying "The timbers used in the mud roofs are too old and rotten to bear much more mud for repairs . . . the roofs leak when it rains and are . . . unsafe and liable to fall in when saturated with water."[41]

How much money was allocated for the west barracks is not known. It must have been a pittance because only a little more than $5,000 was recommended for post repairs out of the nearly $22,000 requested.[42]

An outbreak of measles in the spring of 1884 forced the evacuation of the barracks. The men were moved into a camp outside the walls, but the troop was ordered to provide details to fumigate and renovate the building.[43]

The final estimate for repairs for the fiscal year ending June 30, 1885, was made on March 31, 1884. Included in the estimate were materials for a porch roof: 25 pieces of lumber 2 by 4 inches by 16 feet for plates, 48 pieces 2 by 4 inches by 12 feet for rafters, 1,300 feet of 1 by 6 inch by 16 feet of lumber for roof boards, 1,000 shingles, 25 pounds of 30d and 60 pounds of 4d cut nails. An estimated thirteen days of carpenter's labor were required to finish the job.

Shingle roofs on both ells were also requested, which would have required 8,704 feet of lumber, 52,000 shingles, and nearly 1,000 pounds of nails. The total estimated cost to roof the two ells came to

$698.44, which included forty-eight days of carpenter's work at $3.00 a day. From evidence on the ground, this was never accomplished.

As usual, windows need replacing, and the quartermaster asked for four windows of 12 lights each, with panes of glazed glass measuring 10 by 16 inches. Additionally, 10 gallons of paint, 21 bushels of lime, and a barrel of cement were on the list. The total cost of all the material and labor came to $917.69. The post, though, was already under consideration for abandonment.

The condition of the building, however, was found to be fair, and it was noted that the squad rooms and 20 feet of each ell had shingle roofs. The porch had been refloored in the past fiscal year, which, with other repairs, had cost $371.32.[44]

A few days later, the post surgeon recommended whitewashing the room in the rear of the kitchen and the two squad rooms. The troop commander complied.[45]

The final inspection, made on March 31, 1885, stated that there were six rooms associated with the barracks, no repairs had been made in the past year, and none were requested in the coming year.[46] In June, Fort Craig was abandoned as a military post. Civilians, however, continued to live at the site for at least another ten years.

THE POST BAKERY

During the early years of Fort Craig, each company had its own bakery, the baker being detailed from the company roster. There are documents relating to the need to repair all three of the company ovens in 1864. References to the company bakeries continue until January 1868 when it was reported that a good quality of sweet, light, soft bread was furnished.[47]

The 1865 ground plan shows the kitchen (which surely included an oven) in the west barracks to have been in the last room of the east ell. Interestingly, the same drawing shows a "bake house" but no kitchen in the east set of quarters.

Three years later, on May 9, General Order No. 22 directed that a post bakery be established using the oven in the quarters of Company B, Third Cavalry. In July, authority to pay an enlisted man for daily duty as a post baker was requested.[48]

Except for references to the baker and to unsatisfactory flour in February, records are silent about the post bakery until October 1869, when it was again ordered that a post bakery be established. So, for some reason not clear from the presently available documents, the post bakery was out of operation for an unknown period of time between July 1868 and October 1869.[49]

The post bakery described in 1869 consisted of an adobe oven in the center of a 22 by 20 foot room. No drawings of the oven have been found to date. The ceilings of the room were 11½ feet high, and the floor was of jaspe. The quality of the bread produced was deemed "excellent."[50]

Again, the only clues to the operation of a post bakery are contained in day-to-day correspondence concerning monetary and flour savings from the bakery and the detailing of extra-duty men. There is one directive ordering the post supply of hard bread and crackers to be dried out in all of the ovens in use in the garrison.[51]

A Post Council of Administration on October 31, 1872, appropriated no money to the Fifteenth Infantry regimental fund because the post bakery oven had fallen in. Bread was "baked outside the garrison" until the oven could be rebuilt. Apparently the oven was back in operation by late December because the post baker was excused from Sunday morning inspections.[52]

Between the first of January and the end of February and from July 1 to August 31, 1873, supplies cost more than the operation of the post bakery saved, and the bakery did not operate between October 1873 and January 1874. Bread was supplied by company bakers during this period and perhaps until April of 1874. In that month, the post baker returned from duty at Fort Cummings, New Mexico; the "bake house" was

repaired; and the post bakery reestablished. The absence of a post bakery is reflected in the 1875 report by the post surgeons, who did not record its existence.[53]

During the previous year, the bakery had been using 33 cans of yeast powder a month. With an increase in garrison strength, it was supposed this requirement was expected to double. The large amounts of flour in use created such a powdery haze in the bakery that the chief baker ordered a hand brush to keep things tidy. The post treasurer could not get one locally but he did find a "wisp broom" instead, listing the item simply as a broom. The adjutant general's office disallowed the expenditure because a broom could have been procured from the quartermaster department. In attempting to justify the purchase, the treasurer acknowledged his error in listing the item as a broom and stated that it "was absolutely necessary to have this in order to Ensure Cleanliness in the Bakery."[54]

During the next year and a half, only the correspondence relating to unspecified bakery property and the detailing of men to daily duty as post baker give any indication that the bakery was operational.[55]

Further insight into bakery operation is found in the court-martial of an enlisted man detailed on extra duty as the post baker. He was found in an alcoholic stupor in the bakery between 11:00 in the morning and 1:00 in the afternoon of May 30, 1877. He was sentenced to the forfeiture of his pay for one month.[56]

The final reference to the post bakery during the first occupation is related to damage that occurred to 89 rations of bread in March 1878. Although no criminality was attached to the loss by the Board of Survey investigating the incident, the post commander demanded that the post baker be held accountable because inattention due to "oversleep" was not an excuse for escaping responsibility.[57]

When the post was reoccupied in 1880, a post bakery was in operation by December 9 and continued in one manner or another at least through the spring of 1884. Whether or not the oven was fired up for baking once garrison strength was depleted and it was known that the post would definitely be abandoned is not known. What sort of oven was in use in 1880 is also open to speculation. Given the number of collapsed walls and roofs found on reoccupation and the problems associated with the original oven, it seems unlikely the 1870s oven would have been in good enough condition to be used without extensive repair or rebuilding.[58]

Early in February 1882, the post adjutant reported that the bottom of the post bakery oven was in poor condition and that the post commander wanted it taken care of at once. A man was sent from the post quartermaster's department immediately to repair it. Unfortunately, the problem was not described.[59] Apparently the oven was in generally poor condition, for a probable reference to the pending construction of a new one exists in a telegram dated April 1, 1882, when the post commander reported his transportation would be tied up hauling more than 100,000 pounds of bricks during the following week.[60]

No plans have yet been located for the existing oven, but the man who had a hand in the building of it can be identified. Private John Jones was detailed on extra duty as a mason in the post subsistence department to build an oven. His detail with the subsistence department began on April 22 and ended on May 1, 1882.[61]

In January of 1883, the post quartermaster was directed to examine the oven in the post bakery and make an estimate of the repairs needed so that the work could be done quickly. The problem was not described. The oven was in operation two weeks later when instructions for issuing bread was contained in an order issued on February 22. The damage to the oven was not extreme because the inspection made on March 31, 1883, noted that only $14.00 had been expended on general repairs during the past fiscal year.[62]

Apparently post bakers were in short supply and enlisted men were placed on daily duty in the bakery, though not always happily. The post adjutant advised the company commander of the enlisted man detailed as post baker in January 1883 that the dissatisfied trooper would be relieved as soon as the competent baker applied for at district headquarters arrived at Fort Craig.[63]

Difficulty in getting a competent baker continued through July. No baker could be found in either the cavalry troops (both detached at the time) or the infantry company, and district headquarters was again asked to provide a baker. In the meantime, the disgruntled enlisted man was reassigned to daily duty as the

post baker. On August 1, a soldier who had been sent from Fort Stanton to teach baking completed his job. On the same day, an enlisted man from the infantry company at Fort Craig was assigned to the post bakery to learn the routine.[64]

The remainder of the documents for 1883 relate to the detailing of different men to daily duty in the post bakery. These documents provide the only concrete evidence that the facility continued to operate.

A letter from the post adjutant to the quartermaster in March 1884 directed him to withhold one cord of hardwood from the allowance of each of the three companies at Fort Craig. The wood was to be issued to the post bakery when requisitioned by the baker.[65]

When the annual inspection was made a year later, the post bakery was described as a one-story building of adobe whose dimensions were 120 by 24 feet and included five rooms. This hardly seems to be an accurate description and might be explained by the quartermaster's unfamiliarity with the operation of the bakery. The 1884 ground plan, made on March 31, shows just the southernmost room of the east ell as the post bakery, and with the drop in garrison strength in the following months, an expanded bakery would have made no sense. The estimate for repairs stated that none had been made during the previous year, and none were asked for in the coming year.[66]

The lack of plans for and specific references to repairs of the post bakery during both occupations is frustrating, and is made even more so by the remarkable ruin uncovered during the 1991 season.[67] Further archeological work in the post bakery would broaden our understanding of the oven and fill out the sparse information in the historical record. It might, indeed, be all that would ever be known about the Fort Craig post bakery. ✠

NOTES

1. For a short discussion of the reasons for the abandonment of the Fort Conrad site, see Chapter 9, this volume. The White Mountains are about seventy miles southeast of the Fort Conrad site.

2. Post Returns, January–February 1854, Fort Conrad, N.M., Post Returns, November 1851–February 1854, Returns from U.S. Military Posts, 1800–1916, Records of the Adjutant General Office [AGO], Record Group [RG] 94, National Archives and Records Service [NARS], Washington, D.C. Hereafter, Post Returns, Conrad. Post Returns show men who were present and absent on the last day of the month; thus, the lieutenant in charge of the timber party was not at Fort Conrad on the last day of February 1854.

3. Statements by Billings and three post surgeons notwithstanding, Fort Craig was actually established on March 31, 1854 (Post Returns, Conrad; Post Returns, March 1854, Fort Craig, N.M., Returns from U.S. Military Posts, 1800–1916, AGO, RG, NARS. Hereafter, Post Returns). The Fort Craig surgeons were Brewer, Tiedemann, and Boughter (Billings 1875:249–251). See also Order [O] 16, Headquarters Fort Conrad, N.M., Mach 29, 1854, found in General Orders, Special Orders and Circulars, April 1854–June 1885, Fort Craig, N.M., Army Continental Commands, 1821–1920, RG 393, NARS. Hereafter, Orders. All orders cited here originated at Headquarters, Fort Craig, N.M. O 16 directed that Fort Conrad would be broken up on March 31, 1854, and a small guard left until the public property could be moved to Fort Craig.

4. O 3, April 14, 1854, was regarding a garrison court-martial that resulted from a "quarrel and fight during meal time in the Mess tent" of Company K, Second Dragoons (Orders).

5. Letter [Ltr] July 21, 1877, Post Quartermaster [QM] to Post Adjutant [Adj] in "Case of Condition of public buildings at Fort Craig, N.M. Extract from Insp Report" [hereafter, AR 1877, QM Roll], Quartermaster General Consolidated File containing Letters Received by the Post Quartermaster (1882), and Letters sent by the Fort Marcy Post Quartermaster (1865–1867), Office of the Quartermaster General, RG 92, NARS. Hereafter, QM Roll.

6. "Report on condition of the public buildings at Fort Craig Letter of July 20, 1869"; "Estimate of Building material labor, &c for repair of Public Buildings at Fort Craig, N.M. in the Fiscal Year ending June 30th 1874" in Ltr July 11, 1873 Post QM to Quartermaster General [QMG], Washington, D.C., QM Roll. Hereafter, AR 1873, QM Roll. "Annual Inspection report, Public Buildings Fort Craig, N.M. on the 31 day of March 1885., with estimates for additions alterations and repairs for the fiscal year commencing July 1st 188-.," QM Roll. Hereafter, AR 1885, QM Roll. The 1884 Post QM stated the capacity of the three squad rooms then in use was 192, of whom 80 were in the new center barracks (Ltr, February 15, 1884 Post QM to Post Adj, Letters Received [LR], Fort Craig, N.M., 1854–1885, Army Continental Commands, RG 393, Roll 7, Frame 217).

7. Ibid.; Cir No. 8, 1875, 250; Cir No. 4, 1870, 245.

8. Cir No. 8, 1875, 250; O 6, January 6, 1883, Paragraph [para] III and O 44, February 25, 1883, para IV, Orders.

9. Andy, November 2, 1863, Fort Craig, to "Dear Sister," in Marchand, ed. 1966:67–68; the quote is on p. 68. Presumably he was not quartered in the picket-post set erected during the Civil War and torn down about 1868, if not earlier.

10. Special Order [SO] 414, November 28, 1864, para II; SO 217, June 23, 1864, Orders; Ltr September 4, 1864, Post Commander [CO] to Post Adj refers to bedbugs in all three sets of quarters, LR, Roll 2, Frames 286–287; Ltr March 1, 1865, Post Adj to Post QM in reference to mosquito bars, Letters Sent and Endorsement Books, Fort Craig, New Mexico, August 17, 1864–December 29, 1870, Army Continental Commands, RG 94, NARS. Hereafter, Roll 2, LSEB. O 19, March 1, 1878, states that mosquito bars cost 73 cents (Orders).

11. General Order [GO] 15, April 22, 1872, case 3, Private Patrick McCluskey, Company K, Fifteenth Infantry [Inf]; O 33, December 1, 1855, Orders.

12. SO 180, January 9, 1864, Orders; Cir No. 4, 1870, 245; Cir No. 8, 1875, 250; Ltr February 9, 1881, Post CO to Post Surg [Surg] in reply to the surgeon's sanitary report dated January 3, 1881 [hereafter, Ltr February 9, 1881, LS I], Letters Sent, Endorsements [End], Telegrams [T], 1870–1885, Fort Craig, N.M., Army Continental Commands, RG 393, NARS, Roll 1, Frame 509. Hereafter, LS 1. End 394, March 10, 1882, Post CO to ?, Letters Sent, Telegrams, 1870–1885, Fort Craig, N.M., Army Continental Commands, RG 393, NARS, Roll III, Frame 502. Hereafter, EB. See Chapter 9, note 5 for sources of the 1854–1884 ground plans. The 1854 map has the Civil War temporary buildings on it as well as the fortifications; nevertheless, 1854 is the date assigned to the map by NARS.

13. See Chapter 5, this volume; GO 15, April 15, 1865, para I, Orders; Ltr August 16, 1865, Post Adj to Officer of the Day, Roll 2, LSEB. Hereafter, Ltr August 16, 1865, Roll 2, LSEB. Apparently the means for fighting fires were limited throughout the first occupation; the Post QM referred to the need for "proper facilities for extinguishing fires" in a letter dated June 25, 1877, to the QMG Washington, D.C. (QM Roll).

14. A few of the multitude of examples are found in GO 16, ca. April 13, 1863; GO 15, April 15, 1865, para I, Orders; Ltr August 16, 1865, Roll 2, LSEB; Ltr 310, November 10, 1867, Post Adj to CO Company [Co] C, 38th Inf, Roll 2, LSEB; Cir, March 9, 1869, Orders; Ltr April 16, 1874 Post Surg to Post Adjut, LR, Roll 5, Frames 152–153. Hereafter, Ltr April 16, 1874, LR, Roll 5. GO 327, October 3, 1875, Orders; Sanitary Report dated November 30, 1876, LR, Roll 5, Frames 217–218. When most of the artifact hunting was going on at the site in the late 1960s, someone ran a trench behind the ruins of all three barracks. Among the finds were coins, civilian and military buttons, friction primers, percussion caps, animal bones, clay pipe pieces, and a wide variety of lead balls, bullets, and buckshot.

15. Ltr 126, August 9, 1868, Post CO to Acting Assistant Adjutant General [AAAG] District of New Mexico [DiNM] and End, August 17, 1868, from the Chief Quartermaster [CQM] DiNM to Acting Post QM, Roll 2, LSEB. The cost at the time for locally produced shingles was $9.50 per thousand for 500,000 split, shaved, and delivered; if a lesser amount was ordered, the cost was 50 cents more a thousand (End 259, August 21, 1868, Post QM to CQM DiNM and End September 5, 1868, CQM Department of the Missouri [DMo] to CQM DiNM, Roll 2, LSEB). Three hundred vigas, each 25 feet long by 8 inches thick "at the top," and 200 vigas 18 feet long by 8 inches at the top at $2.00 apiece were specified, but which buildings they were intended for was not stated (End 401, October 13, 1868, Post CO on Estimate, October 9, 1868, from Post QM, Roll 2, LSEB).

16. Ltr 225, February 22, 1869, Post CO to CQM DMo, End 880, November 24, 1869, on Ltr of Post Surg by Post CO to ?; Ltr 142, February 25, 1870, Post CO to Acting Assistant Adjutant General [AAG] DiNM; Ltr 498, June 24, 1870, Post CO to AAAG DMo, Roll 2, LSEB. Hereafter, Ltr June 24, 1870, Roll 2, LSEB. GO 4, March 30, 1871, Orders; Ltr 65, April 1, 1871, Post CO to DiNM, Roll 2, LSEB. End 245, November 11, 1871, by AAAG DiNM on inspection made at Fort Craig by CQM DiNM on October 8, 1871, EB II, Frame 144.

17. End 314 [2d] Post CO October 10, 1872, on Quarterly Sanitary Report made on September 30, 1872, by the Post Surg, EB II, Frame 241.

18. Ltr dated July 4, 1875, in "Extract from annual report" of Post QM, QM Roll. Hereafter, AR 1875, QM Roll. End 295, September 22, 1875, by CQM DMo on Ltr July 4, 1875, from Post QM, EB II, Frames 593–594. Hereafter, End 295, EB II. Ltr June 25, 1877, Post QM to the QMG Washington, D.C.; Ltr July 21, 1877, Post QM to Post Adj, AR 1877, QM Roll. The June 25 letter referred to jaspe as "Native cement."

19. End 345, May 26, 1881, Post CO on Ltr of Post QM, n.d., EB III, Frame 281. Hereafter, End 345, EB III. Ltr February 15, 1882, Special Inspector to AAG DINM, LR, Roll 6, Frames 42–45. Troops were at the site as early as May 1880, but formal reoccupation of the post and its buildings did not occur until November 1, 1880.

20. End 394, March 10, 1882, Post CO to ?, EB II, Frame 502; Ltr 212, March 22, 1882, Post CO to AAG DiNM, LS I, Frame 645. Ltr March 31, 1882, Post QM to QMG Washington, D.C. in "Case of Annual Report on condition of public buildings at Fort Craig, NM," QM Roll. Hereafter, AR 1882, QM Roll.

21. Ltr April 12, 1883, Post QM to QMG Washington, D.C. in ". . . Annual Inspection Report of public buildings" at Fort Craig, QM Roll. Hereafter, AR 1883, QM Roll. Ltr March 31, 1884, Post QM to QMG Washington, D.C., in ". . . annual Inspection of public buildings" at Fort Craig, QM Roll. Hereafter, AR 1884, QM Roll.

22. End 155, November 20, 1867, CQM DiNM to Post QM; End 189, December 10, 1867, Post QM to CQM DiNM, Roll 2, LSEB. Hereafter, End 189, Roll 2, LSEB. End 836, October 16, 1869, CQM DiNM to CO DiNM and End October 24, 1869, AAG DiNM through CQM DiNM to Post QM, Roll 2, LSEB; Cir [October] 1869, Orders; Ltr June 24, 1870, Roll 2, LSEB. The last letter uses "cement flooring" and jaspe interchangeably.

23. AR 1873, QM Roll. The cost of the adobes was $30.00; lime was 75 cents a bushel and lumber cost 4 cents a foot. The total estimated cost came to $532.00 for two sets of quarters.

24. End 146, June 29, 1874, Post QM to CQM DiNM, EB II, Frames 427–428. End 251, November 6, 1874, Post CO to DiNM on Post QM's End of November 3, 1874. Hereafter, End 251, EB II. Ltr July 11, 1875, Post QM to CQM Washington, D.C. in "Annual Inspection of the public buildings" at Fort Craig, QM Roll. Hereafter, AR 1875, QM Roll. End 295, EB II; End 263, November 18, 1874, CQM DiNM to AAAG DiNM, EB II, Frame 476; End 310, October 22, 1875, Post Co to DiNM, EB II, Frame 600; AR 1877, QM Roll.

25. End 345, EB III; Telegram [T] 122 February 18, 1882, Post CO to AAAG DiNM, LS I, Frame 623; O 11 [41?], February 25, 1882, para I, Orders; End April 9, 1882, AR 1882, QM Roll.

26. End 189, Roll 2, LSEB.

27. SO 249, December 17, 1864, para III, Orders; Ltr June 24, 1870, Roll 2, LSEB.

28. See note 5, Chapter 9. Also consulted but of no particular value to this study were the 1863 ground plan in Marchand 1966:51 and the pre-1876 plan found in Headquarters, Military Division of the Missouri, 1876 (reprint ed., 1972:51).

29. End on Ltr December 11, 1866, Franklin Dowd to Post ?; End 2, January 3, 1867, Post CO to DiNM; End 6, January 13, 1867, Post Adj to CO Co B, 3d Cav; Ltr 17, January 14, 1867, Post Adj to Franklin Doud [*sic*], Tailor, at Fort Craig; End 7, January 18, 1867, Post CO to Mr. Doud, Roll 2, LSEB.

30. Ltr 76, May 7, 1868, Col. and Bvt. Maj. Gen, William B. Hazen to AAG DiNM, Roll 2, LSEB. As has already been discussed, a temporary set of enlisted quarters was built when more dormitory space was required during the Civil War, , and a permanent set was constructed in the 1880s, making Hazen's statement suspect.

31. GO 18, May 1, 1868, para 2, Orders.

32. Ltr August 8, 1868, Post Surg to Post Adj, LR, Roll 3, Frame 111.

33. Ltr August 13, 1868, CO Co B, Third Cav to Post Adj, Roll 2, LSEB; End 285, Post Adj to CO Co B, Third Cav and 2d End CO Co B, Third Cav to Post Adj, LR, Roll 3, Frame 181. The placita wall was the original post wall which ran behind the barracks.

34. Ltr February 22, 1869, Post CO to CQM DMo, LR 3, Frames 559–560. The previous contract price for lime was $1.44 per fanega, and it was believed it could be purchased for slightly more than that amount.

35. Ltr 142, February 25, 1870, Post CO to DiNM, Roll 2, LSEB.

36. Ltr April 16, 1874, Post Surg to Post Adj, LR, Roll 5, Frames 152–153; Ltr 168, October 3, 1875, Post Adj to Post Surg, LS I, Frames 245–246.

37. Ibid. Possibly the fulminating adjutant meant feet rather than yards; the real pity is that the surgeon's report is missing.

38. Copy of a request by CQM DiNM to make estimates for certain repairs, November 9, 1881, LS I, Frame 591. Apparently the CQM had paid a visit to Fort Craig.

39. End 905, December 20, 1881, Post Adj to Post QM on Ltr December 19, 1881, of CO Troop [Trp] M, Fourth Cav, EB III, Frame 431; End 932, December 29, 1881, Post QM to CO Trp M, Fourth Cav, through Post Adj, EB III, Frame 438.

40. AR 1882, QM Roll.

41. AR 1883, QM Roll.

42. Ibid. The total amount requested was $21,793.53.

43. O 54, March 30, 1884, paras I, II, Orders.

44. AR 1884, QM Roll. For the porch, shingles cost $5.00 a hundred, 3d nails 8 cents a pound and 4d nails 12 cents a pound. The total cost of 1,900 feet of lumber was given as $82.65, and the carpenter earned $3.00 a day. Roof plates to roof the ells measured 2 by 6 inches by 20 feet, rafters 2 by 4 inches by 14 feet, and "stock boards" were 1 by 12 inches by 16 feet. Carpenter's time on that part of the project was estimated at 48 days. The cost of three boxes of 8 by 10 inch glass was a dollar more. Paint was $2.00 a gallon, lime 70 cents a bushel, and cement was $7.50 a barrel.

45. Ltr 110, April 4, 1884, Acting Post Adj to CO Trp M, Fourth Cav, LS I, Frame 864.

46. AR 1885, QM Roll. The QM obviously did not include the east wing, which housed the post bakery and several other rooms, although the bakery had been figured in repair estimates for the entire building in the past.

47. Ltr September 4, 1864, Post CO to Post Adj, LR Roll 2, Frames 286–287; Ltr January 15, 1868, Chief Commissary of Subsistence [CCS] DiNM reporting from Fort Craig to the Post Acting Commissary of Subsistence [ACS], LR, Roll 3, Frame 248.

48. GO 22, May 9, 1868, para II, Orders; Ltr 109, July 24, 1868, Post Treasurer to AGO Washington, D.C., Roll 2, LSEB. Thirty-five cents a day was the rate paid.

49. Ltr December 4, 1868, Post QM to Post Adj, LR, Roll 3, Frame 202; End 541, February 19, 1869, Post Adj to ?, Roll 2, LSEB; GO 27, October 10, 1869, para VII, Orders.

50. Cir No. 4, 1870, 246. The post surgeon said the floors were "gypsum."

51. End 842, November 2, 1869, Post CO to Post Council of Administration, Roll 2, LSEB; End 62, March 13, 1871, Post CO to Post ACS, EB II, Frame 81; End 89, March 11, 1872, by Post CO on Ltr March 10, 1872, from CO Trp H, Eighth Cav, EB II, Frame 177; Ltr 111, June 2, 1872, Post CO to AAAG DMo, LS I, Frame 114; End 313, August 27, 1872, by Post CO on Ltr August 23, 1872, CCS DiNM to Post CO, EB II, Frame 231.

52. Ltr 197, November 5, 1872, Post CO to Regimental Adj, Fifteenth Inf, Santa Fe, N.M., LS I, Frame 132; GO 22, December 23, 1872, Orders.

53. Ltr November 8, 1873, AGO Washington, D.C., to Post CO, LR, Roll 4, Frame 400; Ltr 38 April 14, 1874, Post CO to AGO Washington, D.C., LS I, Frame 200; Cir No. 8, 1875, 249–251, which was undoubtedly written the year before. Fort Cummings was roughly ninety miles southwest of Fort Craig.

54. End 209, August 31, 1874, from Post Treasurer on Ltr n.d. from AGO Washington, D.C., EB II, Frame 450. The wisp broom cost 63 cents (End 49, January 25, 1875, Post ACS to Post CO, EB II, Frame 510). The amount of yeast used prior to the increase of two companies in November 1874 was alluded to but not specified (November 1874 Post Returns).

55. Ltr 188, November 11, 1876, Post Adj to CO Co A, Fifteenth Inf, LS 1, Frame 310; SO 326, March 7, 1877; GO 18, May 20, 1877, Orders.

56. GO 21, June 22, 1877, case 5, Pvt. Charles Fisher, Co G, Fifteenth Inf.

57. O 30, March 18, 1878, para I, Orders; End 116, March 27, 1878 by Post CO on Ltr March 20, 1878, from Board of Survey, EB II, Frame 34. The culprit was Charles Fisher, and the Post CO thought he should have been court-martialled.

58. SO 225, December 9, 1880; passim, 1880s, Orders. Most of the orders detail the men to the position of post or assistant baker. The Fourth Cavalry left Fort Craig on June 5, 1884, and the 23rd Infantry left on June 1, 1884. Strength fell from 164 to 11 men. The arrival of the Sixth Cavalry on June 26, 1884, brought 56 men (aggregate) to the post, and they left in October (May–October 1884 Post Returns).

59. Ltr 97, February 6, 1882, Post Adj to Post QM, LS 1, Frame 618.

60. T 220, April 1, 1882, Post CO to AAG DiNM, LS I, Frame 647. Some of the bricks might have been intended for chimney repair, but the excavators who worked on the oven in August 1991 claim they removed the entire amount! See Chapter 5, this volume.

61. O 90, April 22, 1882, para I assigned Jones to the duty and O 95, May 1, 1882, detailed him to duty in the QM department as a mechanic (laborer), indicating the oven may have been completed (Orders).

62. End 143, January 25, 1883, Post Adj to Pvt. John A. Weaver, Co F, 23rd Inf through CO Co F, 23rd Inf, EB III, Frame 713.

63. Ltr 55, February 8, 1883, Post Adj to Post QM, LS I, Frame 758; O 41, February 23, 1883, paras I, II, Orders; AR 1883, QM Roll.

64. End 653, June 23, 1883, Post CO to DiNM, EB III, Frame 781; O 99, June 12, 1883, Orders; Ltr 237, August I, 1883, Post CO to AAG, DiNM, LS I, Frame 801; Ltr 23, August 1, 1883, Post Adj to CO Co F, 23d Inf, LS 1, Frame 801; Private McCarthy, Co E, Thirteenth Inf appears to have arrived at Fort Craig sometime in July (June–September 1883 Post Returns). He drowned three days after being appointed post baker. Fort Stanton is about ninety miles east of Fort Craig, but is no longer an active military post. Troops E and M, Fourth Cavalry, the detached units, were at Richmond [Virden], N.M., from March 27 to September 11 (March–September 1883 Post Returns).

65. Ltr 78, March 5, 1884, Post Adj to Post QM, LS I, Frame 855.

66. AR 1885, QM Roll.

67. See Chapter 5, this volume.

Chapter 11

THE EAST OFFICERS' QUARTERS

Marion Cox Grinstead



TWIN SETS OF OFFICERS' QUARTERS WERE BUILT at Fort Craig directly opposite the two sets of enlisted men's quarters on the south side of the wide parade ground. Aside from the references to the timber parties being detached to cut vigas (roof poles) in January and February 1854, there is no documentation related to the construction of the officers' quarters or their place in the sequence of building activity.[1]

The earliest reference to the officers' quarters seems to be in Lydia Lane's memoirs in which she described visiting the post commander's wife in later September 1857. The weather had been dismally wet and all of the roofs at the post were leaking badly. Mrs. Lane found the commander's lady sick in bed and sitting under a tent fly and an umbrella to keep the dripping water off of her head.[2] The commanding officer's quarters at the time were in the west set.

Two months later, a young lieutenant generally described the officers' quarters by stating they were each 90 feet long and had dining rooms, kitchens, and storerooms in the ells, along with quarters for servants. In the individual backyards, small gardens were under cultivation. Each building was fronted by a tall veranda whose roof was supported by "simple Doris [*sic*] columns" of pine. His observation of the post from the front gate on the west was one of "Grecian simplicity," a very pretty picture, indeed.[3]

The earliest documentary reference to the officers' quarters is found in an angry exchange between two officers in January 1860. This episode involved a sergeant who barged into the "mess hall" of one of the sets.[4]

OVERVIEW

Documentation of the quarters is extensive, but scattered throughout the records. Until about 1868, however, it relates to no particular set of quarters so the frustration met in documenting the enlisted men's barracks applies to the officers' quarters as well. Documented repairs were serious ones that finally overwhelmed day-to-day maintenance efforts, and in spite of all the documentation that does exist, there are too many lapses in the record to get a complete picture.

In July 1869, the post quartermaster reported three buildings in use as officers' quarters (eight sets), each measuring 120 by 150 feet. The capacity was 16 officers. Of the eight sets, two were in poor condition and needed roofs. Where the third structure was is not known, although the quartermaster may have included

the commanding officer's quarters in his description. Four years later, two buildings, each measuring 150 feet across the front (south) and each with two wings measuring 50 by 20 feet (north-south), were described in an estimate for repairs. There were 31 rooms in the two sets. The annual inspection report made on March 31, 1885, gave the dimensions of the two sets as 210 by 30 feet, but how the quartermaster arrived at those figures remains a mystery.[5]

The structures were U-shaped duplexes with five or six rooms to a set. Post quartermasters used the word "set" interchangeably to describe an entire building or one side of it. Each set consisted of a 20- by 20-foot room on the front wall of the structure. In 1869, that room functioned as a bedroom. On the opposite side of a 15- by 20-foot hall, another room on the front measured 20 by 20 feet and was used as a dining room. A hallway measuring 12 by 15 feet led north from the dining room past a small servant's room on the outer wall of the building. At the end of the hall was a 20- by 20-foot kitchen. All the rooms had ceilings 12½ feet high. Heating in 1869 was by open fireplaces, and the quarters were considered to be well-lit. Latrines were in detached buildings across the placitas in the rear of each set. A post surgeon's report made in 1874 left out most of the foregoing details but did state that heating was still by open fireplaces. No specific statement with regard to the location of the privies was made in 1874, but it was noted that there were no bathrooms. The floor plan that accompanies the report (published in 1875) is of the commanding officer's quarters.[6]

In a discussion that erupted in 1868 over the necessity of a third set of officers' quarters, a newly arrived post commander argued against the construction, saying that in the existing sets the rooms were "excessively large." Two of the sets contained suites of four rooms (one corner front room and, in the ell, a large and a small room and a kitchen) that were meant to be assigned to families, captains, or field-grade officers. The single room on the front wall of each set was meant to be assigned to a lieutenant.[7]

A lieutenant writing his memoirs recalled that in 1869, when he was stationed at Fort Craig, his particular quarters was a single, 20-foot-square room with an earth floor and a dirt roof. The roof was sagging so badly that the center viga was propped up with a large cottonwood pole.[8]

A wall divided the open spaces between the ells into small backyards, or *placitas*. The number of rooms in the ell and their functions seem to have varied as requirements changed. There are indications of use as storerooms, stables, and outhouses.[9]

Civil War period maps show the latrines behind the officers' quarters outside the walls,[10] but when they were placed there is open to question. The post surgeon evidently reported them as being filthy at the end of March 1864 because the post commander replied that if they were, it was the fault of the officers since the officer of the day could provide a police detail on request. Further, if they would keep their gates closed, there would be no need for locks. Where locks fit into the discussion is not clear. A letter to the post adjutant in early September remarked that only three outhouses were available for use. About three weeks later, construction had begun on privies in the rear of the quarters with instructions to hire additional masons in order to finish the job as quickly as possible. Construction must have been shoddy. By mid-December they were in need of repair, and the expenditure of 300 feet of lumber was authorized.[11]

Subsequent plans and documents do not specify the location of the latrines. An 1868 plan for a proposed, but never built, third set of quarters included sinks in the placita, which may be an indication that they remained in that position in the two original sets. When the post quartermaster made estimates in July 1873 for post repairs, he included a requisition for 4,000 adobes for yard walls and outhouses and 1,200 feet of lumber for gates, windows, and outhouse doors. When the annual inspection report was made in 1877, the sinks were considered badly weathered and it was doubted they would last much longer. No mention of the officers' privies was made in the 1880s documents, but without a doubt they were in as bad a condition as the rest of the buildings at the post when they were reoccupied in the late fall of 1880.[12]

Roofing

As noted, leaky roofs became a problem early in the life of the fort and probably existed prior to 1857. Like the rest of the post roofs, those on the officers' quarters were constructed by laying vigas across the room walls. A layer of small branches was usually laid at right angles, and over this, mud was applied. However, there is documentary evidence that boards instead of branches were used at Fort Craig. To repair leaks, more mud was added. It was a time-honored method of roof construction in New Mexico and, when properly done, served very well. But by the end of the first occupation, the amount of mud far exceeded the ability of the vigas to support it.

The summer of 1867 was an exceptionally wet one. The post quartermaster reported on August 22 that the quarters' roofs were leaking, and five days later he said that they had been badly damaged during the recent downpours. He complained that it was impossible to keep the roofs in repair with just one mason and requested that he be allowed to hire two more masons and five Mexican laborers for a month or until repairs were completed. The commanding officer not only concurred, he hired the necessary men and then wrote to district headquarters after the fact, requesting the authority to do so. In a letter written on September 6 and received at Fort Craig on September 11, district headquarters approved the hire of the masons but insisted the laborers be discharged and replaced with enlisted men. On September 13, the post quartermaster inquired if he could keep the laborers until the 20th, and then replace them with six enlisted men. By the time the request was received back in Santa Fe, it would hardly have mattered, but whether or not the Mexicans continued to work in the meantime is one question that cannot be answered.[13]

In the middle of January 1868, the post commander was of the opinion that the officers' quarters' roofs would have to be removed and replaced with ones of jaspe in the spring because he believed that "It makes the best and cheapest roofs in the end." The change does not seem to have been made at that time. In mid-April, repairs to the leaking roofs were authorized by the commanding officer. Three months later, all officers were ordered to watch for leaks in their quarters and, when found, to repair them using enlisted men from their own companies.[14]

About two weeks later, on August 9, the first mention of shingling the roofs occurred when the commanding officer inquired of the chief quartermaster at district headquarters in Santa Fe if he could buy shingles should they cost less than $8.00 a thousand. He thought they would be cheaper than trying to maintain the dirt roofs even if the shingles cost twice as much. To support his recommendation, he stated that the roofs leaked badly in spite of efforts to stop it, and that the heavy rains common during the summer months added greatly to the weight of the roofs once they became wet. As a result, the quarters were "unhealthy, and almost uninhabitable." The post quartermaster was directed to estimate the cost of shingles, which he reported could be delivered for $9.50 a thousand if 500,000 or more were ordered and for 50 cents more if less than that number. The cost included splitting, shaving, and delivery by a local (unnamed) businessman. The proposition continued under discussion until the middle of September, but nothing came of it, possibly because there was some question of maintaining Fort Craig as a military post.[15]

A new commander in October 1868 expressed the opinion that shingles were not feasible because the walls would not support their weight. His solution was to completely remove the mud, replace the old vigas and rotten boards with new ones, and cover them with lime and sand, which he believed would last for many years.[16]

The following February, it was reported that most of the roofs on the post were about to be redone. Whether or not the project included any of the officers' quarters is not known, but the annual inspection report made on July 20, 1869, by the post quartermaster stated that of the eight sets of quarters, four were in poor condition and required new roofs.[17]

In November 1869, a mason was at work laying jaspe on the post roofs. It was expected to take three months to compete the job because the needed repairs were extensive. The mason was still at work the following February when 50 pieces of timber (20 to 40 feet long) for vigas and more jaspe were requisitioned.

The commanding officer reported in June that he had completed the reroofing project, but they all blew away in the spring winds of 1871.[18]

The struggle with roof maintenance continued, with the post surgeon reporting in July 1872 that all the roofs were in dire need of repair and that the post quartermaster was only waiting on a shipment of jaspe to begin. Slightly more than three months later, the officers' quarters were reported as being in a "very leaky condition." Part of a $1,000 appropriation for repairs was scheduled to be used for their repair. Toward the end of October the inspector general visited Fort Craig and found that all of the roofs needed replacing. Apparently, extensive repairs were made because the annual inspection of the buildings on June 30, 1873, reported that they were in good condition due to recent repairs.[19]

No information regarding the roofs appears in the records for the next two years. On July 4, 1875, the post quartermaster reported generally on the condition of all roofs at the post. He remarked that although rains did not occur often, when they did they were severe enough to wash out the dirt roofs, and jaspe was not a useful alternative material. Shingles were again recommended. A month and a half later, the quartermaster was directed to furnish an estimate, which would be taken into consideration if appropriated funds were sufficient. On October 22, the post commander recommended shingle roofs for the officers' quarters. For reasons that are not known, none of the roofs was shingled at that time.[20]

Another lapse in the records regarding roof conditions ended on June 25, 1877, when the post quartermaster lamented about the constant attention required to keep the roofs in repair. Once more, shingle roofs were recommended as a solution. When he made his annual inspection report on July 21, he noted that the wooden roof parapets were in need of replanking and that 800 bushels of lime were required to repair both the enlisted men's and officers' quarters' roofs. But at the end of the first occupation in August 1878, the post roofs were still of mud.[21]

During the nearly two years of abandonment, the roofs of the post washed out and some fell in. Troops had been in their quarters for some time after the fort was reoccupied before the problem was addressed, but finally in late May of 1881, the post commander reported that there were several broken vigas and rotten boards in the quarters' roofs, making occupation of them hazardous until they were repaired. The commander, a former post quartermaster at Fort Craig, believed that if the post was to become permanent, shingle roofs should be added to the quarters. However, the records are silent with regard to what repairs had been made, and shingles were not ordered until sometime later when part of the enlisted men's quarters was reroofed.[22]

A letter written by the post commander on March 10, 1882, described all the roof timbers on the post as "badly sprung by the great weight of earth," but he wanted no action taken on an estimate for labor and materials to shingle the roofs. According to his estimate, it would cost more to shingle the roofs than the allotted appropriation for all post repairs. Instead, he preferred to use "Painted corrugated sheet iron 24 gauge" on the officers' quarters and had already written to E.E. Souther & Company of St. Louis, Missouri, requesting estimates for roofing several post buildings.[23]

Souther & Company suggested sloping the roofs, but the commander rejected the idea because it would have required raising the front walls 5 feet. If his plan were accepted, part of the dirt roofs would be removed to relieve pressure on the center of the rooms, the cause of most of the roof problems. Enough dirt would be left to protect the occupants from the heat the iron roofs would generate. Arguing the advantages, he stated that iron roofing would be "cheaper, lighter, more durable and can be put on in less time and with less labor; and can be taken of [*sic*] should the post be abandoned, and used elsewhere; it weights [*sic*] only about ⅙ as much as shingle roofing, costs less than one half that of tin, and is more durable than either."

He continued, saying that he had estimated for plain iron rather than the corrugated to cover the joints at the ridges instead of the combing strips and caps made for that purpose because using those would make the ridges cost $256.00 alone, or $200.00 more than the use of plain iron. He conceded the plain iron would not be as attractive.

No estimates were made for gutters because they were useless during the commonly torrential summer rains. In addition, he supposed that the estimates for the carpenter's labor was high since most of the work could be done by enlisted men.

The post commander enclosed the circular Souther & Company had sent him, but he thought the iron could be procured from Kansas City or Leavenworth (perhaps for the same price), which would save time.[24] Unfortunately, the estimates are missing from the Fort Craig records.

On March 31, 1882, the post quartermaster reported again that the mud roofs were old, dilapidated, leaked badly during summer rains, and were unsafe when soaked. However, the iron had been shipped, and if it worked as well as hoped, it would be required for the other buildings as well. On April 9, the post commander confirmed that the corrugated iron was en route to Fort Craig.[25] No further information exists in the Fort Craig documents regarding roof repairs to the two original sets of officers' quarters or, in fact, for any others.

A photograph taken in 1890 of what was probably the west set of officers' quarters shows the iron roof in place. It is likely that the east set received one as well, although it is not apparent in another picture taken about the same time.[26]

Walls and Floors

It seems likely that the constantly leaking roofs caused damage to the quarters' walls, yet the first mention of trouble did not occur until a letter written on August 22, 1867, by the post quartermaster in which he stated that while plastering and whitewashing some of the walls, he found them so damaged by the recent heavy rains that they required immediate repair. Less than a week later, the commanding officer reported to the district quartermaster that the walls had indeed been badly damaged by the rains. Presumably they were repaired, but the documents are silent on the matter.[27]

Early in January 1869 it was noted that the quarters were undergoing repair, but the nature of those repairs was not stated. In late February, 185 fanegas of lime per set was estimated for plastering the outside walls of the quarters, but this request was disapproved by the district quartermaster early in March. His reason for the disapproval was that quarters at other posts needed interior plastering.[28]

Slightly more than four years elapsed before another specific requisition was made for lime for plastering. It was estimated that it would take 370 bushels at 75 cents a bushel for a total cost of $277.50. About a month later when the annual inspection was made (on July 11, 1873), the walls were reported to be in poor condition inside and out.[29]

The lack of money allocated to the army for repairs and a major flood on the Rio Grande that led authorities in Washington, D.C., to believe that Fort Craig had been washed away make it unlikely that much maintenance was done before 1875. Indeed, the post quartermaster reported on June 29, 1874, that the buildings were shabby and indicated that work on them would have to wait until the next fiscal year.[30] How much wall repair was required and how much was accomplished between 1873 and the abandonment of the post in 1878 remains unknown.

It must be assumed that the walls in the officers' quarters suffered a great deal of damage during the two years the post was not occupied by the military. It was noted on February 12, 1882, that the quarters had been repaired to the extent that they were considered to be comfortable.[31]

Estimates were made in late April or early May 1882 for 150 yards of "heavy cotton sheetings 2 yards wide" at 12½ cents a yard to cover the ceilings of all of the quarters. The district quartermaster approved only 32 yards of this material. At the end of July one of the troop saddlers was ordered to aid the post saddler in putting up the cloth ceilings in the officers' quarters.[32]

Doors around the post had almost entirely disappeared between 1878 and 1880, but the best that could be had in February 1882 had been made of rough lumber. The post commander recommended that they be

replaced with paneled doors. A special estimate for 75 yards of "wire cloth" 40 inches wide and the same amount 36 inches wide, both at 60 cents a yard, was made in late April or early May for window and door screens, but as usual the district quartermaster reduced it, allowing only 50 yards. Photographs taken in the 1890s show none in place, but by that date they could have been removed.[33]

Floors were first mentioned in late November 1867 when the district quartermaster directed that estimates for jaspe, as well as wood flooring, be forwarded to Santa Fe. On December 10, the post quartermaster noted that the estimated 940 bushels of jaspe was for flooring the officers' quarters, which probably included the hallways as well.[34]

That nothing was done about installing wood floors seems apparent from a special estimate made on July 20, 1868, for 5,000 feet of lumber to replace the "earthen floors" in the quarters. Whether or not the estimate was approved is not known.[35]

Nearly five years later, 50 bushels of jaspe at $7.175 a bushel was estimated for flooring, indicating that at least some of the floors were still of this material. The annual inspection made on July 11, 1873, found the floors in good condition, having been repaired.[36]

Apparently jaspe floors were still in use in mid-1877. The final requisition for wood flooring during the first occupation was made on July 21, when 15,000 feet of "ordinary flooring" was ordered for both sets. Also requested was 7,392 feet of lumber, or 336 three-by-fours measuring 22 feet for joists.[37] Unfortunately, records are lacking for the balance of the first occupation, and it is impossible to say whether any part of the lumber was delivered and used.

On May 26, 1881, the post commander suggested that if the post was to become permanent, wood floors ought to be installed. In early November, the post quartermaster was directed to estimate the cost of flooring four back rooms of an unspecified set of quarters, but the records are silent about the outcome. At the end of 1881, 35,000 feet of lumber for flooring was requisitioned, and by February of following year, 22,000 feet had been delivered. An endorsement on the annual report made on March 31, 1882, noted that all quarters would be floored by April 12. It must be assumed that the officers' quarters were part of the flooring project.[38]

Furnishings and Exterior Areas

A number of instructions and remarks concerning the small placitas in the rear of the quarters are in the records. Manure from the stables associated with the quarters was allowed to accumulate and rubbish was burned in the yards. This practice was halted in April 1865 when an order was published directing that such trash be dumped into any of the holes in the ditch surrounding the post and covered with dirt. At the time, slops were picked up from the yards by cart on a daily basis and emptied away from the buildings. Early in October 1875, the post adjutant reported that drains had been built in the placitas to aid in the removal of water that accumulated following rains. A lieutenant was taken to task in the same report for having melon and cucumber rinds and old hay in the rear of his quarters. Undoubtedly this was part of the reason orders were issued to keep a barrel and a box at each set of quarters for slops and other kitchen rubbish as well as ash from the fires so the trash detail could haul them away to be emptied.[39]

Foot traffic must have been heavy and annoying because orders were published on May 16, 1883, prohibiting enlisted men and civilian employees from using the area between the two sets as a passageway even if they were on duty. The order stated the area was for the use of officers and their families only.[40]

By 1873 the trees planted in front of both sets of quarters by the Civil War post commander had died. Thus there was no natural shade of any kind.[41]

Furniture available from the post quartermaster included wardrobes, cupboards, "libraries," kitchen ranges, heating stoves, desks, bedsteads, chairs, tables, and mosquito bars. One lieutenant requested that the quartermaster furnish him with a lounge since the other married officers on post had them. The quartermaster

replied that the lieutenant had been misinformed. From personal knowledge, he knew the government did not supply lounges to married officers, but he had given orders to the carpenter to build one for the lieutenant anyway (either out of the goodness of his heart or perhaps in deference to superior rank). The lieutenant said he believed the quartermaster to be wrong because he had seen a lounge with the quartermaster stamp on it, knew that another had been built by a government employee using government materials, and further, the broken lounge that had been sent to his quarters also had been made with government materials. A requisition made for burnt umber and Spanish brown in oil made in 1874 was intended partly for painting quartermaster furniture.[42]

One personal property list of furnishings included brass candlesticks, a wool mattress, a mirror, a camp chair, a mess chest, a wooden trunk, and an assortment of dining utensils, including a castor. Also listed were a glass inkstand and a washbowl and pitcher. Two items to make the quarters more amenable were a "table-spread" and a coverlid. A list for another officer included a bootjack, a set of pigeonholes for a desk (but not the desk), a wool mattress, three chairs, and a zinccovered trunk.[43]

A photograph of the interior of a room was taken in the 1890s (Figure 11.1). Although the room is full of marvelous Victorian clutter, it is possible to get an idea of what it looked like when occupied by the military. The room was probably located in the southeast corner of the west set of quarters. The fireplace projects several inches from the wall in a solid front that rises to the ceiling. It has been adapted to serve as a stovepipe for the 1874 army issue parlor stove, which is sitting on what appears to be a brick base extending from the fireplace into the room.[44] The fireplace opening has been covered over, and the mantle was hidden by a piece of cloth. On the same wall to the left of the fireplace is a wood-faced doorway with a Territorial-style lintel, which is hung with a vertically paneled door. A window is on the right wall of the extreme right



Figure 11.1. *Interior photograph of a front room in the officers' quarters, ca. 1890s (Museum of New Mexico, Neg. No. 14513).*

side of the picture. The floor is covered with rugs and cannot be seen, but a baseboard is visible to the left of the doorway and on the left wall. A long hook is suspended from the ceiling to hold a lamp. The ceiling appears to be plaster. In the ceiling angle, where the fireplace wall and left wall join, there may have been a small leak. With the tall ceiling, large window, and light-colored woodwork and walls, there is a feeling of airiness and space.

Two exterior photographs of the quarters were made at widely separate dates.[45] Both were taken from roughly the same angle, but it is not known whether or not they are of the same structure. The first picture, taken in 1867 (see Carroll and Sebastian 2000:Fig. 2.6), is of a light-colored building with four windows across the front, one to each front room as well as one window on the side of the corner front room. They appear to have twelve lights over twelve, although the angle makes it difficult to be certain. All the windows are fairly close to the ground. A wide door to each hallway was between each pair of front windows. The wood trim on the windows and doors was in the Territorial style. The porch had ten wooden columns with simplified Doric capitols holding up an earthen roof. The porch floor in the photograph appears to have been dirt, but it was probably badly deteriorated jaspe. Batten boards along the structure's parapet above the right corner of the porch are missing, revealing the mud roof behind it and the peeling plaster on the wall below it. Two unidentifiable lumps on the roof may have been chimneys. On the porch in front of each set was a rickety bench. Across the front of the building was a line of eight scraggly young trees, three of which appear to be dead.

The other photograph was taken about 1890 while Captain Jack Crawford was acting as caretaker of the site (Figure 11.2). Because of the angle, it shows only three of the four windows across the front of the light-colored building. One of them is clearly twelve lights over twelve; the window on the side wall cannot be seen in this picture. Both wide doors into the hallways are visible. Only six of the porch columns, painted a dark color, are visible in the picture, and two of them are considerably shorter than the others, resulting in



Figure 11.2. *Exterior photograph of one set of officers' quarters, ca. 1890 (Museum of New Mexico, Neg. No. 14511).*

a wavy roof line. The porch roof may have been shingled, and the porch floor is wood. The iron roofing material ran east and west across the width of the building, but it is impossible to see how the ells were roofed. There are no trees.

In the annual inspection report made on July 21, 1877, the post quartermaster referred to the two sets as "upper" and "lower." The upper set was considered to be in fair condition even though the floors were still of jaspe, which needed to be replaced by wood. The roof had been leaking over several of the rooms but had been repaired. All of the woodwork was "decayed" and required repair.

The lower set was described as being of the same size but included a third set of quarters. The extra set had become necessary when the garrison was increased by a company between October 1876 and April 1877. Expansion was achieved by cutting a door in the dividing center wall to connect the two center front rooms, and a small frame kitchen was built "in the yards." The floors were still of jaspe, and the post quartermaster believed they should also be replaced by wood. Part of the roof had been leaking badly but had been repaired and was thought to be in "fair order." Some of the walls were giving way, which would soon make that part of the building dangerous for occupation. The outhouses connected with the set had been damaged by rain to such an extent that they were unfit for any purpose.[46]

That troublesome designation of "upper" and "lower" limits our understanding of the two buildings. The problem might be resolved by an archeological investigation of the interior walls of both sets of quarters. If a doorway was found, it would solve the perplexing question with regard to the upper and lower barracks as well.

THE EAST SET OF OFFICERS' QUARTERS

As previously discussed, the building was U-shaped with a center wall dividing it into two sets of quarters. It lay just in front (west) of the original post hospital, although there was ample room between the two buildings to construct a substantial free-standing addition to the hospital in the 1870s.

The ground plan labeled 1854 by the National Archives (with Civil War–period additions) showed six rooms on the west side and five rooms on the east side in the main structure (see Figure 10.2). The sixth room abutted the center room on the north side. Across the placitas against the north wall of each set were two rooms separated by a passageway leading outside the walls. On the east side, the northeast room was used for ordnance storage. In both sets a small room intruded into each placita directly in front of the back row of rooms and against the outer east and west yard walls. The room on the east wall in front of the ordnance room appears to have been marked with a different symbol; perhaps it was the ordnance sergeant's office or quarters. Doors are shown on this plan leading from near the center of the ells as well as from the kitchen into the placitas. A short hall extends along the placita side in front of the small room in the ell. Openings in the east and west walls lead to the outside just north of the kitchens.

On the plan drawn in 1865 (see Figure 10.3) there were seven rooms in the west side, the small room in the ell having been divided. The east set retained the 1854 layout. Doors, gates and hallways remained the same except that a door into the yard from the first room in the east ell was shown.

Changes in the 1866 plan were minor (see Figure 10.4). The center room in the west ell is shown as one room, making a total of six rooms in the set. In the east ell, the second door into the placita is not shown. The rooms along the back wall are not divided, reverting to a total of four, or two per side. Ordnance storage is shown in the same northeast room, with the small room in front of it also marked with an ordnance bomb—the symbol used on all three plans to designate storage of that material and equipment. Gates, hallways, and doors remain the same.

Judging the accuracy of any of the Fort Craig ground plans is problematical. The missing door and walls on these three plans may simply be errors made by the draftsmen, or they could reflect real changes

made between the drafting of the 1865 and 1866 maps. These three maps are the only ones that assign room functions.

The 1854 and 1866 plans show the latrines outside the north walls of the quarters. No latrines were drawn on the 1865 plan. A sketch map made in late April or early May of 1868 leaves the question of the existence of building additions behind the front center rooms and associated hallways unanswered because a line was drawn completely across the back of both sets. The rooms on the north wall were left undivided and without passages to the outside, but this is probably not representative of the actual structures. The small rooms in front of the back row are missing from both sides. The short hall in the east and west ells is shown with doorjambs on the walls facing the placita. A doorway into the yard is shown in the north kitchen walls, but no others were drawn.

A map made when the Fort Craig reservation was surveyed in May 1869 shows a strange projection into the yard of the west ell near the angle of the ell, which appears to have represented a very small room or even a bay window. The room that butted against the north wall of the center front room is missing. The separate small room in front of the back row has reappeared, and the back rooms are represented by a line in front of the north wall; there is no division into individual rooms. The east ell on the east side has no room projecting into the placita at the angle of the ell. The back row of rooms was drawn in an L, encompassing the previously separate, small room in front of it. No doors, gates, or hallways were represented. Latrines on this plan are shown outside the north quarters' walls.

The ca. 1873 plan of the east set shows six rooms on the west side and five on the east side. On the north wall of the east set, four rooms separated by a passageway were drawn with the easternmost room considerably larger on its east-west axis. The same arrangement is depicted on the west, with the westernmost room being the largest.

Two other 1870s plans are virtually useless. One published in 1876 is simply a relabeled 1869 plan. The 1878 plan of the structure shows a simple U without the dividing center wall in either the yards or the quarters (see Figure 9.1). The north row of rooms on the back wall is reduced to a line across the width of the entire building. No doorways, hallways, or gates are represented.

The first map after reoccupation in 1880 was based on a sketch forwarded by the post commander on August 22, 1882. There were six rooms in the west ell, the room abutting the north wall of the center room having reappeared. The east ell is missing the front hall, and a long room extending from the center yard wall to the front of the ell abuts the north side of the center front rooms. It is tempting to associate this with the alterations made to the lower (upper?) set in 1876–1877, but so much time had elapsed and so many walls had fallen during abandonment that it seems unlikely a frame addition would have survived.

Another strange, perhaps inadvertent line was drawn on the east side of the set between the kitchen and the back row of rooms in the yard. On both sides the back rooms are divided into four, although on the east side the room in the northeast corner is considerably larger than the others. Some divisions in this row may represent passageways to the outside (north). Hallways in front of the small rooms in the ells are depicted, and probably those in the front part of the building as well. No doors or gates are shown, and there are no small buildings in front of the back row of rooms in the plaçitas.

A plan drafted on April 30, 1883, shows six rooms on the west side of the quarters and five on the east side. Both sides of the back row on the north yard wall are divided into five spaces, which may represent four rooms and a hallway per side.

The last plan, drawn at the end of March 1884, shows nothing different from the 1883 map (see Figure 10.5). Some very minor changes may have been made during the slightly more than a year the post would remain active, but since no funds were asked for, more substantial changes seem highly unlikely. None of the plans after 1869 noted the location of the latrines.

THE PUZZLE OF THE EAST AND WEST SETS OF QUARTERS

Regrettably, almost nothing specific exists in the documents with regard to either the east or west set of officers' quarters until the 1880s, and even that is severely limited. On July 30, 1863, there is a reference to a sentinel being posted at a set of officers' quarters. Because ordnance was stored on the north and east sides of the east structure, it is believed that the sentinel post was at those rooms.[47]

The post adjutant's monthly inspection made on October 3, 1875, railed at the ashes he spotted behind a lieutenant's quarters, as well as "a heap of filth and manure" from the surgeon's horse, which was stabled in an outbuilding of the same set. Worse, it had not been removed by the following day. This may have been the east set of quarters (and possibly the east side) because of its proximity to the post hospital. Stabling the surgeon's horse there would have been closer to the hospital where he was quartered than to the post stables where the adjutant thought the horse ought to be kept.[48]

Late in 1881, well after the reoccupation of Fort Craig, the post quartermaster was directed to make estimates for floors and roof shingles, indicting that both were in need of extensive repairs. An estimate was also required for a frame porch 8 feet wide with four-by-four posts and a shingle roof. The estimates were made, but the paperwork is missing from the files.[49]

Estimates and correspondence relating to corrugated iron as a roofing material included the east set of quarters. Remarks made by the commanding officer expressed the hope that the plan would be accepted so the job could be completed before the summer rains began.[50]

During the year, the quarters were refloored. Though not quite finished by the time of the annual inspection, the report stated that they would be done by April 12 as the necessary material was on hand. In two unspecified rooms, several of the vigas had cracked or broken and were supported by floor-to-ceiling poles.[51] In addition, sometime during 1881 part of the kitchen walls collapsed and were rebuilt, and other decayed walls were patched.

When the annual inspection was made on April 12, 1883, the quartermaster found the officers' quarters in poor condition even though general repairs amounting to $656.72 had been made during the previous year. He said that the building was the same as the west set, which had received an iron roof and needed a new porch, plastering, and general repairs. The estimated cost to accomplish the repairs came to a staggering $2,272.40.[52]

Only $21.37 was spent on maintenance in the following fiscal year, yet the quartermaster asserted in his 1884 report that the east quarters were in fair condition, except for the porch. It still had a mud roof with vigas so rotten they were expected to collapse when the roof became soaked with rain, and the floor was still of worn-out jaspe; the quartermaster suggested reflooring with wood.[53]

Two weeks earlier, an estimate to replace the porch had been made, including 1,700 feet of flooring for $68.00. Nine hundred feet of lumber measuring 2 by 16 inches by 20 feet (45 pieces) were necessary for the floor joists. Required roofing materials included 720 feet of two-by-fours (60 pieces measuring 12 feet in length) for rafters, 400 feet of two-by-fours measuring 16 feet in length (25 pieces), and 1,300 feet of one-by-six roof boards measuring 16 feet in length. To complete the project, 11,000 shingles costing $55.00 were requisitioned, along with 60 pounds of 4d cut nails ($7.20), 15 pounds of 10d cut nails ($5.20), and 25 pounds of 30d cut nails ($2.00).

Other items for repairs, aside from the porch, included five gallons of mixed paint (no color specified) for woodwork ($10.00), nine bushels of lime ($6.30) and one barrel of cement ($7.50) to plaster and whitewash the walls, 2,000 bricks ($40.00) for chimney repairs, and 18 days' work for a carpenter. The estimated cost came to $366.36.[54]

No repairs were made in the next fiscal year, however, and none were requested in the coming year because it was known that Fort Craig would soon cease to exist as a military installation. The post quartermaster

reported 11 rooms in the east set in 1885, which agrees with the 1884 ground plan, and he stated that the quarters were in good repair, surely incorrect.[55]

The post was abandoned by the military in June 1885. Civilians lived in the buildings for about 10 years following decommissioning, but after they left the post rapidly fell into ruin. A photograph taken in 1908 from the bastion at the southwest corner of the ruins reveals that the west wall of the east set, except for the southwest corner, had entirely collapsed (see Figure 2.3). The front wall of the building and several of the walls in the ell were still standing to nearly their original height. There was no sign of the roof, and although some of the wood in the gaping doors and windows may have been left, most if not all of the wood trim had vanished. ✠

NOTES

1. For a brief discussion of the establishment of Fort Craig, see Chapter 9, this volume.

2. Lane 1964:48–49.

3. Eckert and Amato, 1978:123–124. William Woods Averell remembered the date he arrived at the post as November 5, 1857, but it was actually November 27 (Post Return, November 1857, Fort Craig, N.M., Post Returns, March 1854–June 1885, Returns from U.S. Military Posts, 1800–1916, Records of the Adjutant General's Office [AGO], Record Group [RG] 94, National Archives and Records Service [NARS], Washington D.C.; hereafter, PR with month and year).

4. Letter [Ltr] January 31, 1860, Capt. George McLane, Fort Craig, N.M., to Post Adjutant [Adj], Letters Received, Fort Craig, New Mexico, 1854–1885, Army Continental Commands, RG 393, NARS, Roll 1, Frames 262–263. Hereafter, LR. The term "mess hall" meant that several officers had banded together for their meals and were using a room in a set of quarters as a dining room.

5. "Report on condition of public buildings at Fort Craig, Letter of July 20, 1869 [hereafter, AR 1869, QM Roll]; "Estimate of Building material labor, &c for repair of Public Buildings at Fort Craig, N.M. in the Fiscal Year ending June 30th 1874," in Ltr July 11, 1873, Post Quartermaster [QM] to Quartermaster General [QMG], Washington, D.C. [hereafter, AF 1873, QM Roll]; "Annual Inspection report, Public Buildings Fort Craig, N.M. on the 31 day of March 1885, with estimates for additional alterations and repairs for the fiscal year commencing July 1st 188-.," [hereafter, AR 1885, QM Roll], Quartermaster General Consolidated File containing Letters Received by the Post Quartermaster (1882) and Letters Received by the Fort Marcy Quartermaster (1865–1867), Office of the Quartermaster General, RG 94, NARS. The only measurements given for the commanding officer's quarters—80 by 40 feet—are given in AR 1869, QM Roll.

6. Billings 1870:245–246, 1875:249–251. In some of the sets, the sixth room abutted the north wall of the "bedroom."

7. Ltr 76, May 7, 1868, Col. and Bvt. Maj. Gen. W. B. Hazen to Acting Adjutant General [AAG], District of New Mexico [DiNM], Santa Fe, N.M., Letters Sent and Endorsement Books, Fort Craig, New Mexico, August 17, 1864–December 29, 1870, Army Continental Commands, RG 98, NARS. Hereafter, Roll 2, LSEB. Majors, lieutenant colonels, and colonels were field-grade officers.

8. 2nd Lt. John G. Bourke, Third Cavalry, in Bloom, ed., 1934–1938. The reference to Bourke's quarters is in NMHR (January 1934) 9:40. Bourke served at Fort Craig from September 29, 1869, to February 19, 1870 (PR, September 1869–February 1870).

9. General Order [GO] 15, paragraph [para] I, April 15, 1865 [hereafter, GO 15], General Orders, Special Orders and Circulars, April 1854–June 1885, Fort Craig, New Mexico, Army Continental Commands, 1821–1920, RG 393, NARS. Hereafter, Orders with number and date. All orders cited here (unless otherwise noted) originated from Headquarters, Fort Craig, N.M.

10. The sources of ground plans are provided in Chapter 9, note 5. Although the post quartermaster referred to the building locations by the cardinal points, they are not aligned on a true grid.

11. Endorsement [End] March 30, 1864, Letters Sent and Endorsement Books, Fort Craig, New Mexico, March 31, 1854–August 16, 1864, Army Continental Commands, RG 98, NARS, Roll 1 [hereafter, Roll 1, LSEB]. Unfortunately, the surgeon's letter is missing. Ltr September 4, 1864, Post QM to Post Adj, LR, Roll 2, Frames 285, 287; Special Order [SO] 347, para I, September 23, 1864, and SO 429, para III, December 17, 1864, Orders.

12. "Proposed Plan for Officers' quarters–Fort Craig–1868 by C. Grover," QM Roll; AR 1873, QM Roll. Lt. Col. and Bvt. Maj. Gen. C. Grover, 38th Infantry, was the post commander. The adobes cost a total of $40.00 and lumber was 4 cents a foot (Ltr July 21, 1877 Post QM to Post Adj in "Case of Condition of public buildings at Fort Craig, N.M. Extract from Insp report," QM Roll; hereafter, AR 1877, QM Roll). When vandalism was extensive in the 1960s and 1970s, the rows of buildings along the north walls were dug into deeply. Bottles, bones, bullets, and civilian and military buttons were recovered in quantity, and a particularly well-preserved male half of an artillery saber belt buckle of the loop and clasp style was also found. The same variety of trash was found in the area behind the buildings, but it was mixed in with large quantities of charcoal and ash.

13. Ltr August 22, 1867, Post QM to Post Adj, LR, Roll 2, Frames 1082–1083. Hereafter, Ltr August 22, 1867. Ltr 250 August 27, 1867, Post Commanding Officer [CO] to CQM DiNM, Roll 2, LSEB. Hereafter, Ltr August 27, 1867. Ltr September 6, 1867, Acting Assistant Adjutant General [AAAG] DiNM to Post CO, LR, Roll 2, Frames 913–914; Ltr September 13, 1867, Post QM to Post Adj, LR, Roll 2, Frames 1068–1069. The laborers and masons were also working on other buildings.

14. Ltr 16, January 19, 1868, Post CO to CQM Department of the Missouri [DMo], Fort Leavenworth, Kansas; End 128, April 14, 1868, Post Adj to Post QM, Roll 2, LSEB. Unfortunately, the quartermaster's letter is missing.

15. GO 38, para 2, July 22, 1868, Orders; Ltr 126, August 9, 1868, Post CO to AAAG DiNM and End August 17, 1868, CQM DiNM to Acting Post QM; End 359 August 21, 1868, Post QM to CQM DiNM and End September 5, 1868, CQM DMo to CQM DiNM; End September 17, 1868, AAAG DiNM to Post QM; End 1184 October 4, 1870, "late Acting Quartermaster" to CQM DiNM and End October 8, 1870, Post CO to CQM DiNM, Roll w, LSEB. The request for shingles included the enlisted men's quarters. The last two endorsements (1870) were related to a contract dated December 21, 1867, for the delivery of lime, which the Post CO approved since nothing definite was known about the abandonment of the post.

16. End 401, October 9, 1868, Post QM to Post CO and End October 13, 1868, Post CO to CQM DiNM, Roll 2, LSEB. Estimates were for 300 vigas, each 25 feet long, and 200 vigas, each 18 feet long, all 8 inches thick "at the top," at an estimated cost of $2.00 each; 2,000 bushels of lime at $1.50 a bushel; and a mason.

17. Ltr 225, February 22, 1869, Post CO to CQM DMo, Roll 2, LSEB; AR 1869, QM Roll. The report stated that there were eight sets in three buildings; the four sets in poor condition were the two structures on the north side of the post.

18. End 880, November 24, 1869, on Ltr of Post Surg by Post CO to ?; Ltr 142, February 25, 1870, Post CO to AAG DiNM; Ltr 498, June 24, 1870, Post CO to AAAG DMo, Roll 2, LSEB.

19. End 271, July 17, 1872, Post CO on "Sanitary Report for quarter ending June 30th 1872" by Post Surg; End 314 [3d], October 10, 1872, on "Sanitary Report for the quarter ending September 30, 1872," by Post Surg, Letters Sent, Endorsements, Telegrams, 1870–1885, Fort Craig, N.M., Army Continental Commands, RG 393, NARS [hereafter, LS I, EB II or III], EB II, Frames 221, 241; "Case of Extract from Report of Inspection of Ft. Craig, N.M. Made in October 1872 by Ins Genl David Quartermaster General's Office, Feby 20, 1873. . .;" Ltr July 21, 1873, Post QM to QMG, Washington, D.C., AR 1873, QM Roll.

20. Ltr July 4, 1875, in "Case of Annual report of Lt. Kinzie on condition of public buildings at Ft. Craig N.M.—new floors &c needed. . . Extract from Annual Report. . .," QM Roll. Hereafter, AR 1875, QM Roll. End 295, CQM DMo, on Ltr July 4, 1875, from Post QM; End October 4, 1875, CQM DiNM to Post QM and End October 8, 1875, Post CO on Ltr October 18, 1875, from Post QM, EB II, Frames 593–594, 600.

21. Extract of Ltr June 25, 1877, Post CO to QMG, Washington, D.C., and Ltr July 21, 1877, Post QM to Post Adj, AR 1877, QM Roll.

22. End 345, May 26, 1881, Post CO on Ltr of Post QM n.d., EB III, Frame 281. Hereafter, End 345. Troops were at Fort Craig in May 1880 but the post was not formally reoccupied until November 1 of that year. Although the December 1880 Post Return is the first to note that the men were repairing buildings "for the reoccupation of troops," exactly when they moved into the structures cannot be determined (PR, December 1880).

23. End 394, March 10, 1882, Post CO to ?, EB III, Frame 502; Ltr 212, March 22, 1882, Post CO to AAG DiNM, LS I, Frame 645.

24. Ibid.

25. Ltr March 31, 1882, Post QM to QMG, Washington, D.C., in "Case of Annual Report on condition of public buildings at Fort Craig N.M.," QM Roll. Hereafter, AR 1882, QM Roll. End 602, April 9, 1882, Post CO to ?, EB III, Frame 535. An interesting trade was made by Fort Craig with E. E. Souther & Company when a "lot of nails" was exchanged for some of the needed iron and paint (Ltr 376, July 27, 1882, Post CO to Depot QM, St. Louis, Missouri, LS I, Frame 688).

26. The picture is of the John W. (Capt. Jack) Crawford family and some friends on the west quarters' porch and is in the possession of Harriett Richardson, a decedent. The writer's copy was made from a print in the possession of Dorothy and Louise Virgin, Santa Fe, N.M. Hereafter, Virgin Photo.

27. Ltr August 22, 1867; Ltr 250, August 27, 1867.

28. End 491, January 5, 1869, Post Adj to Post QM, Roll 2, LSEB; Ltr February 22, 1869, Post CO to CQM DMo, LR, Roll 3, Frames 559–561; End 1289, March 8, 1869, CQM DiNM to ? and End 554, March 10, 1869, AAAG DiNM to ?, LR, Roll 3, Frame 587. Lime purchased on the previous contract cost $1.44 per fanega. It was thought that the price would not hold for the current proposal, but that it might be near that figure if bids were requested.

29. AR 1873, QM Roll. The total estimated cost for all repairs to both sets of quarters was $453.00.

30. End 146, June 29, 1874, Post QM to CQM DiNM, EB II, Frames 427–428.

31. Ltr February 15, 1882, Special Inspector to AAG DiNM, LR, Roll 6, Frames 42–45.

32. "Estimate of quartermaster's stores required at Fort Craig, N.M. during the Period ending 30th June 1882" [hereafter, QM stores 30th June 1882] and "Special Estimate of Quartermaster stores for period ending June 30, 1882," QM Roll. Order [O] 143, para I, July 27, 1882, Orders. The troop saddler was assigned to Troop M, Fourth Cavalry, one of two troops of cavalry then on duty at Fort Craig.

33. End 345; End 263, February 19, 1882, Post CO to CQM DiNM, EB III, Frame 480; Ltr May 5, 1882, Post QM to CQM DiNM enclosing QM stores 30th June 1882, QM Roll; Virgin Photo.

34. End 155, November 20, 1867, CQM DiNM on Ltr November 13, 1867, from Post QM; End 185, December 5, 1867, on Ltr November 30, 1867, from Post QM; and End December 10, 1867, Post QM to CQM DiNM; End 189, December 10, 1867, Post QM to CQM DiNM Roll 2, LSEB. The wording in the last document is somewhat obscure, however the hospital had no hallways at this time, so it is assumed that the reference is to the officers' quarters.

35. "Special Estimate and Requisition for authority to purchase lumber for the repair of Officers quarters, Hospital buildings and to build a Ferry boat at Fort Craig, N.M.," by Post QM, July 20, 1868, LR, Roll 3, Frames 20–24.

36. Ltr July 11, 1873, Post QM to QMG, Washington, D.C., AR 1873, QM Roll. The estimate made for jaspe on June 10 was for roofs and floors; the total cost was estimated at $87.50.

37. AR 1877, QM Roll.

38. End 345; Copy of a request by the CQM DiNM to make an estimate for certain repairs, November 9, 1881, LS I, Frame 591. Hereafter, Estimate November 9, 1881.

39. GO 15; Cir March 9, 1868, Orders. Ltr 168, October 3, 1875, Post Adj to Post Surg, LS I, Frames 245–246. Hereafter, Ltr October 3, 1875. GO 27, October 3, 1875; O 85, May 16, 1883, Orders. Hereafter, O 85, Orders.

40. O 85, Orders.

41. "There are [*sic*] not even one shade tree at Craig. All of the trees Papa planted here have died just through carelessness," ("Papa Rigg" [E. A. Rigg, the Civil War post commander] to "My Dear daughter Sallie," August 9, 1873, Fort Craig, N.M., copy of a letter in the possession of George R. Wisner, a Rigg descendant. Rigg also remarked that the summer temperatures that year had ranged between 90 and 106 degrees.)

42. Ltr March 1, 1865, Board of Survey to Post QM, Roll 2, LSEB; O 19, March 1, 1868, gave the cost of mosquito bars as 73 cents each. End 164, April 5, 1876, on Ltr from AAAG, DiNM and End 173, April 10, 1876, forwards to DiNM, EB II, Frames 700, 703; End December 7, 1880, on Ltr CQM DiNM, End 439, February 21, 1882, CQM DMo to AG DMo continuing End 198, February 9, 1882, End 769, May 29, 1882, Post CO to CQM DiNM, End 53, January 11, 1883, Post Adj to Post QM, and End 59, January 12, 1883, Post Adj to Post QM, EB III, Frames 119, 469, 552, 700, 701; "Special Estimate for Building materials Required at Fort Craig N.M., June 29, 1874," AR 1873, QM Roll. GO 38, para 1, July 22, 1868, directed that quartermaster furniture would not be removed from vacated quarters.

The correspondence regarding the lounge is found in End 59, February 8, 1875, Post Adj 1st Lt. J.W. Bean on Ltr February 8, 1875, from Acting Post CO 1st Lt. J. W. Bean and End 60, February 8, 1875, Acting Post CO on Ltr of Post QM, February 8, 1875, EB II, Frames 513–514.

43. Both lists were for deceased officers. The first was Capt. Daniel B. Haskell, First Veteran Infantry, California Volunteers, who drowned in the Rio Grande on May 7, 1865 (Ltr 97, May 8, 1865, Post CO to Col. N. H. Davis, Las Cruces, N.M., and Ltr 21, September 4, 1865, Post CO to AGO, Washington, D.C., Roll 2, LSEB). The second officer was 2nd Lt. S. C. Plummer, Fifteenth Infantry, who was on duty at Fort Craig from March 14 to August 2, 1881, and who died on November 14, 1881, while on leave in Washington, D.C., perhaps from "acute inflammation of the Pleura" (PR, March–August 1881; End 237, February 17, 1882, Post CO to DiNM, EB III, Frame 475; West Point Alumni Foundation 1963:255).

44. The parlor stove is described and illustrated in Clary 1984:478, 490.

45. The exterior photograph made in 1867 was taken by William A. Bell (Horn and Wallace 1965:245–247; the photograph is a reproduction from the Arizona Historical Society, Tucson, neg. no. 14946). The second exterior photograph taken in the 1890s is in the possession of Harriett Richardson (also in the New Mexico State Records and Archives Center, Santa Fe). Dorothy and Louise Virgin identified the seated lady wearing a white apron in the image as Mrs. Crawford. Eva Crawford is seated in the hammock, and her sister, May, is standing in a white apron. There are kittens in the box. Dorothy Virgin said the Crawfords kept a cow in the placita (interview with Dorothy and Louise Virgin, September 2, 1979, Santa Fe).

46. AR 1877, QM Roll.

47. GO 36, July 30, 1863, Orders.

48. Ltr October 3, 1875.

49. Estimate November 9, 1881.

50. AR 1882, QM Roll.

51. Ibid.

52. Ltr April 12, 1883, Post QM to QMG, Washington D.C., in ". . . Annual Inspection Report of public buildings" at Fort Craig, QM Roll. The total estimated cost for all post repairs was $21,793.53 (Cemeterial File).

53. Ltr April 12, 1884, Post QM to QMG, Washington, D.C., in ". . . Annual Inspection of public buildings made March 31, 1884," QM Roll.

54. Ibid.

55. AR 1885, QM Roll.

Chapter 12

THE NEW HOSPITAL

Marion Cox Grinstead



AVAILABLE RECORDS DO NOT INCLUDE any particular complaints by the surgeons regarding the inadequacy of the old hospital other than its being cramped when some of the rooms were being used for other purposes, especially early in the Civil War. The usual problems with leaking roofs and crumbling floors existed along with the rest of the buildings on post.[1] The facilities were, of course, totally inadequate for the casualties from the Battle of Valverde on February 21, 1862.

After Valverde, the inadequacy of the hospital must have been a continuing subject for discussion, and plans and estimates for a new one were forwarded in mid-July 1863 to Department Headquarters in Santa Fe. The expense was not expected to be high, aside from labor to manufacture the adobes, the purchase of the necessary lumber, and extra carpenters.[2] Nothing came of the proposal, possibly because a great deal of money was already being spent on the fortifications and storehouses begun after Valverde.

A year later, another plea was made for a new hospital because the old one was "Entirely inadequate and unsuited to the purpose, the rooms are too small, too low on the ground, hemmed in on either side, allowing but little ventilation; no fit place for convalescents to promenade, or seat themselves in the shade, no cooling breeze of an afternoon. . . ." The post commander and the surgeon collaborated on plans for a large building that would have been located outside the garrison walls. Stapleton's sawmill, located northwest of Fort Craig in the San Mateo Mountains, would be able to furnish all the lumber quickly and at a reasonable price. The estimated cost for the proposed building was $8,000.[3] Once again, the idea fell on deaf ears in Santa Fe.

By 1867, the hospital had fallen on hard times along with the rest of the buildings. In May of 1868, a project to end the general deterioration of all the buildings was undertaken.[4]

Early in September 1868, the post surgeon submitted a plan to the chief medical officer of the district for two new wards (Figure 12.1). It was approved by him and forwarded to the district commander under the following endorsement: "The present Hospital is objectionable in every respect. It being impossible to do justice to sick men of the Command in its illy ventilated and contracted wards." The plan was referred back to the Fort Craig commander on September 15 for a further report with instructions that all work on the hospital was to be stopped until further notice. The post commander returned the plan eight days later, stating that he thought it was "a very good one" and that the wards should be built. He went on to say that the existing hospital was "limited and old" and that no work had yet been done on expanding the facility.[5]

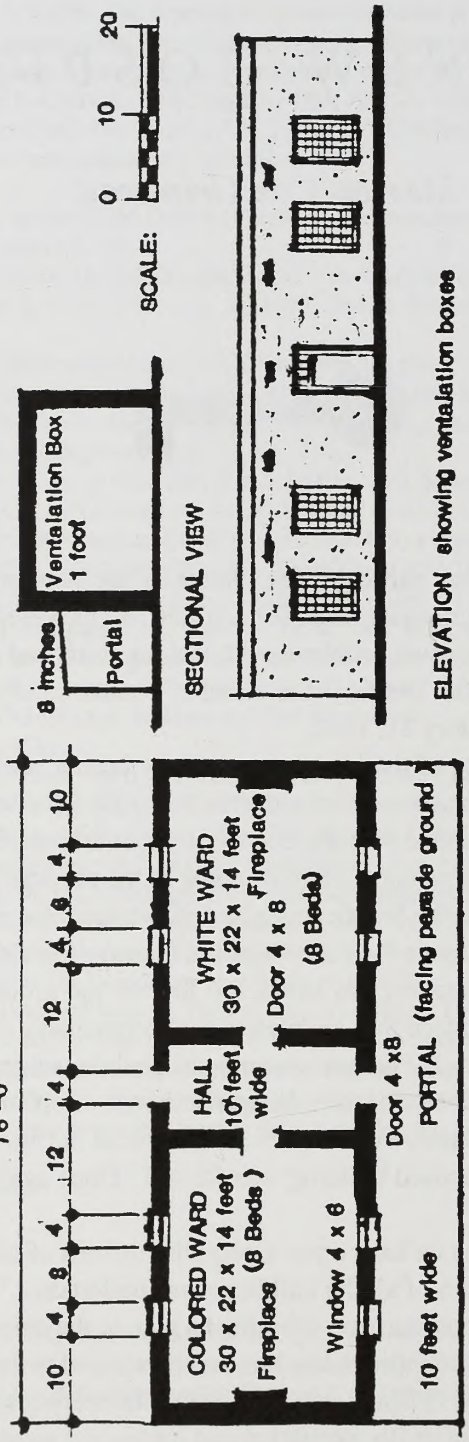


Figure 12.1. 1868 plan of the new hospital (on file, BLM Socorro District Office).

A modification of that plan was apparently used to build two new wards facing the parade ground (south) and directly in front (west) of the hospital.[6] One major difference between the 1868 plan and what was actually built was the ventilators. The original proposal included several ventilation boxes placed in the walls one foot below the ceiling, because it was thought that ridge ventilation would not work with adobe walls. As built, six ventilators were placed in the ridge. The plan called for two windows each in the front and rear walls of both wards. They measured 4 by 6 feet and were double-hung so they could be opened from the top or bottom. A report published in 1870 erroneously stated the windows measured 4 by 8 feet, which was the size of each of the four doors in the new building.[7] The plan specified one-foot transoms opening to the outside on the front and back doors; whether or not these were included in the final construction is not known. Floors rising two feet off the ground were planned.

Outside measurements of the new building were 78 feet long by 28 feet wide and 18 feet high. Projected wall and foundation thickness was 24 inches; the 1870 report gave the internal measurements of the building as 70 by 20 feet. Each ward measured 30 feet long (east-west) by 22 feet wide on either side of a hall 10 feet wide by 20 feet long. As in the old hospital, interior wall height was 14 feet, about 2½ feet higher than in other buildings at Fort Craig. Large fireplaces in the center of the east and west outer walls of each room were included. A porch running the width of the structure and 10 feet wide was planned for the front of the building.

There was room for eight beds in each ward, the same number as in the old hospital wards. The improvement in conditions was in the increased amount of cubic air space per bed—1,155 in the new wards but only 700 in the old hospital.[8]

In late February 1869, authority was granted to buy lumber for the new building on the open market at not more than $60.00 per thousand feet and adobes at not more than $11.00 per thousand. Neither price could exceed the estimates approved by the quartermaster general.

By the time of the 1869 annual report on July 20, not much progress had been made in completing the structure. On that date, the post quartermaster wrote that it would take 30 days to finish the wards with one carpenter and one mason. Carpenter work remaining included flooring, making and hanging doors, and setting window frames. The mason was needed to do the roofing, plastering, and to complete the chimneys. The nature and amount of work left to do sounds like nothing was finished but the walls. The structure was described as being in the Mexican style with a capacity for 16 patients.[9]

In mid-October, the chief quartermaster of the district stated that the expenditure of lumber for flooring was proper, as it had been planned for in the "original plans and estimates." Assigning this endorsement to the new hospital is problematical, however, as the 1869 annual report did not refer to a need for flooring in the old hospital.[10]

The last week in November, the post surgeon made a plea to have the necessary civilians hired to complete the building because it would certainly fall into ruin in its present state. In his endorsement, the post commander concurred, saying that it was not safe. He thought the roof should be removed and the rafters reset on plates before anything else was done. A mason was at work on other roofs, but if the work on the new hospital was authorized, he would have to stop what he was doing. In short, the commanding officer argued that more civilians would have to be hired.[11]

The correspondence was forwarded to the chief quartermaster at the Department of the Missouri. In his reply of December 18, 1869, he stated that Fort Craig would probably be abandoned in the spring, so it was recommended that only the work that could be accomplished by a civilian mason and the troops be authorized.[12]

The surgeon's 1870 report noted that the building was still unfinished because material was not available and the civilian mason superintending the job was let go in September before the work was completed, leaving soldiers to finish up. An extra-duty man with prisoners from the guardhouse reportedly laid the rest of the adobe bricks. A flat roof was constructed of rafters and planking and was covered with sand and gypsum (like the other roofs on post). The surgeon complained that the troops had no idea how to handle the

procedure, so 500 bushels more than was required was applied. Predictably, the roof sagged, collecting rain in the center and endangering the walls because of the excess weight.[13]

Wind howled through the gaping windows and whistled down the doorless hall—from the southwest in the summer, the north during the winter, and the west in the spring, when it brought terrible dust storms. Rain, snow, and freezing temperatures deteriorated the exposed adobe walls.[14]

Evidently, nothing more was done about the building until August 4, 1871, when the commanding officer wrote district headquarters asking for permission to complete the building with troop labor. Floors, doors, and windows were unfinished; the porch had not been built; and the roof was leaking. The plan of the structure was forwarded with the polite request that it be returned to Fort Craig.

The chief quartermaster replied by endorsement that the old hospital had always been considered adequate from the time the post had been established, even with a larger garrison than the present one. His recommendation was that the roof be repaired by troop labor until it was decided whether or not to increase the number of men at the post. Department headquarters agreed.[15]

Two days later, the Secretary of War stopped all repairs army-wide because of a lack of funds. No money was appropriated in 1874, either. Nevertheless, the post quartermaster submitted estimates for repairs to the Fort Craig buildings in 1873, including the completion of the new hospital.

Material needed to finish the building included 2,400 feet of lumber for floors and ceiling; 1,800 feet for doors, windows, and window casings; and 1,000 feet for joists and sleepers for flooring and roofing, for a total cost of $208.00. In an endorsement made a month later, the medical director of the Department of the Missouri remarked that most of the $771.00 estimate for hospital repair that had been submitted appeared to be earmarked for the completion of the two new wards. If this were accomplished, the wards in the old hospital could be put to other uses, and he approved the estimate if a new kitchen was built adjoining the old hospital. However, the commanding general of the department recommended that no action be taken since a general order from the Adjutant General's Office had not been complied with. It was a moot point because the army was out of funds for such projects.

When money again became available, the estimates were resubmitted, but before an authorization could be made, the quartermaster general in Washington, D.C., was under the impression that Fort Craig had been washed away in a flood, and for that reason he was decidedly against authorizing any funds. The fact that the post had not washed away was transmitted through channels to the quartermaster general on August 20, 1874.[16]

Meanwhile, on October 29, 1873, the post surgeon requested that the quartermaster be authorized to build a "Thermometer Box" in front of the new hospital. Authorization was granted on November 9. Since the surgeon's letter is missing from the Fort Craig documents, it is impossible to say what form the box took or whether or not it was an official requirement or simply one of his pet projects.[17]

Notwithstanding noncompliance with orders and rumors of loss by flooding, one ward and the hall of the new hospital were finally completed in December 1874. The cost to complete that much of the building came to a substantial $981.50. Because the structure had been open to the elements so long, a portion of that expenditure must have gone toward the repair of weather damage.[18]

The following April, the post quartermaster asked for permission to use the window glass in his stores to complete the hospital "now in the course of erection." The commanding officer forwarded the request with his approval and the recommendation that district headquarters' approval be given for the expenditure of any and all supplies required to complete the two wards. Santa Fe forwarded the request with the remark that it was understood the expenditures were to be kept within the appropriation. Authority was granted by the Military Division of the Missouri on May 18, 1875, and on May 29, district headquarters returned the correspondence to Fort Craig with the admonishment that the funds must be spent before the end of the fiscal year, even if it meant having the work contracted out.[19]

A clue to other work being done on the building is provided in a letter written in May 1875 regarding the transfer of transportation for which the post quartermaster was responsible. The transportation involved was mules from Fort Tularosa that were being transferred to Fort Stanton. He reported that the exchange could not take place until the teams returned from the sawmill where lumber to finish the post hospital was being loaded. Two months earlier, in March, R. H. Stapleton had furnished vigas on credit, "agreeing to wait and run his chances of payment for same" from the new appropriation. In January 1876, he asked to be paid. The post quartermaster conceded that the "transaction was irregular and without authority," but that it was a just claim. On January 13, the chief quartermaster of the district directed that Stapleton be paid from hospital funds at Fort Craig.[20] From this correspondence, it would seem that roofing was underway in the spring of 1875.

Even though work had been done on the new hospital, in 1875 the structure was still not completed. Once again, rumors of abandonment were in the air. Early in March of the following year, the post surgeon asked that the hospital appropriation be applied toward finishing the building. The post quartermaster emphatically agreed, stating that if the post was to remain open, the money should be spent *"at once,"* before the end of the fiscal year. But if the post was to be vacated, he thought it would be foolish to spend the money and recommended transferring it to another fort rather than allowing it to revert to the U.S. Treasury Department. The chief quartermaster of the district directed that the money be spent on repairs to the Fort Craig hospital. Since the document is only a brief, it is not possible to know whether the money was intended for the new wards or for general hospital repairs.[21] Garrison strength was increased by one infantry company in April 1876; it departed the post in October 1877. The increase may have provided the impetus for continuing the work on the two wards.

Estimates for a shingle roof for the hospital were submitted by the post quartermaster on June 19, 1877. Unfortunately it is impossible to tell if the estimate included the two new wards, though in light of the mortar roof noted in the annual inspection made the following month, it seems unlikely that it did.[22]

The annual report submitted on July 21, 1877, clouds our understanding of the sequence of events. The post quartermaster reported that the two wards had "been built but two years ago," indicating a completion date of sometime in 1875. He reported that the mud roof had leaked and been replaced by a "mortar" roof. The building was in "very good order" with a capacity of twelve beds in the two rooms.[23]

In an endorsement dated August 20, 1877, the commanding general of the Department of the Missouri, in response to an inquiry from division headquarters, wrote that "The removal of Indians has, in my opinion, deprived . . . Fort Craig of any military importance. [It is] used now simply as [shelter] for troops. . . ." He recommended that no money be spent on repairs to the post buildings.[24]

Aside from a small building drawn outside the defensive wall and off the northeast corner of the new hospital on the 1878 ground plan of the post, no further information regarding the new hospital was found in the Fort Craig documents from August 1877 to the first abandonment of the post in August of 1878. The buildings at Fort Craig were probably reoccupied in late August or early September 1880, but the commanding officer made no mention of the hospital in a letter he wrote the following May to district headquarters detailing the deterioration he found. Late in August 1880, two enlisted men were detailed as nurses to the post hospital, but that facility could have been in a tent.[25]

With the reopening of the fort, the two wards referred to so many times in the 1870s as the "new hospital" simply became part of the hospital. Estimates for repair were no longer listed separately, so it is difficult to find out much about the building from the summer of 1880 until Fort Craig finally closed in the summer of 1885. The documents related to the hospital seem better left to a study of the original buildings (see next chapter). Some specifics are available, as discussed in the remainder of this chapter.

An inspection made by the inspector general of the Department of the Missouri on February 12, 1882, gave high marks to the condition of the hospital. Late in November of the same year, the post commander

reported to Santa Fe that little had been done on hospital repairs because it was more important to complete the new corrals and barracks needed to house a second troop of cavalry that was joining the garrison. The following January, the quartermaster general was wondering how it was possible, given the good report of nearly a year before, that the estimated bill for hospital repairs could come to the staggering sum of $1,846.76. He disapproved the estimates as he was of the opinion the post would not be occupied long enough to warrant the expenditure.[26]

Between August 22, 1882, and April 31, 1883, a square bathhouse was constructed just outside the back doors of the two wards. A plan of the hospital (see Figure 13.3) dated March 22, 1884, shows a window in the east and west walls, a door in the south wall, and what appear to be two tubs against the north wall. The material used was not specified.[27]

The yearly inspection that was probably made on March 31, 1883, included another request for a shingle roof. The addition of outhouses and a lavatory to the building was reported. That construction, along with general repairs to all three buildings, came to $1,006.18.[28]

The lavatory was built by partitioning off the north end of the hall just north of the doors into the wards. There was an opening in the center of the partition, and the back door remained in use. The material used in the construction of the partition is not known; it might have been wood frame, or it could even have been a curtain, a solution not uncommon at Fort Craig. A rectangle is drawn against each hallway wall on the plan, the one on the west side being slightly longer, but it is possible this was a slip of the draftsman's pen. It is likely that these represented stands for washbasins.[29]

The same plan does not designate either ward as colored or white, but numbers them "1" on the west side and "2" on the east side. Neither does the plan illustrate the fireplaces. If beds really were placed on either side of the fireplaces as drawn, it would have been cramped.

During June 1883, there was at least one case of smallpox in a civilian employee; both he and the Mexican gardener looking after him were forbidden to enter the garrison. In October, an enlisted man suffering from the same disease was quarantined near the post, probably in a tent.[30]

The post commander inspected the hospital on March 25, 1884, and reported that it was roomy and well ventilated. The continual concern about the forthcoming summer rains and the damage they could cause to the walls was uppermost in his mind, but he thought if the necessary funds were made available, "it can be made one of the very best in New Mexico."[31]

The 1884 annual report noted that repairs to the hospital totaling $247.92 had been made during fiscal 1883, but those required for the next year were projected at $1,397.58. A shingle roof over the wards and a picket fence around the structure had been added during the previous year.[32]

Insight into the colors used in the hospital is found in a letter dated August 27, 1884, written to the district chief quartermaster explaining how a $100 appropriation had been used. Paint purchased included white, Prussian blue, chrome yellow, and Spanish brown. Dry lampblack was also bought. It was already known that Fort Craig was to be abandoned, perhaps as early as October, so authority was requested to ship them elsewhere.[33]

In early April 1884, troops were quarantined in a camp near Fort Craig because of an outbreak of measles. In mid-September, typhoid and typho-malarial fevers were at the post, necessitating a thorough cleaning of the hospital. The post surgeon requested that an enlisted man be detailed on daily duty as a night nurse since the fever was prevalent. These patients may have been housed in the isolation ward in one of the rooms of the old hospital.[34]

On March 31, 1885, the final hospital inspection was made. Nothing had been repaired in the preceding year, and no repairs were asked for in the coming fiscal year. Eight rooms were considered in good condition, which was probably not true. The measurements given for the facility were 165 by 165 feet, and it is difficult to understand how that figure was reached.[35]

There are no known photographs of the two wards. A photograph of the ruins taken in 1908 shows only the top edge of the walls behind the east set of officers' quarters (see Figure 2.3). By 1965, only the corners and a few of the interior walls were between 4 and 6 feet high (see Figure 2.5). In the early or mid-1970s, a cow ignominiously brought down the last corner while rubbing against it.[36] ✠

NOTES

1. For a brief discussion of the establishment of Fort Craig, NM, see Chapter 9. Many references to roof and floor repairs at Fort Craig are found in the preceding and subsequent chapters of this volume.

2. Letter [Ltr] July 14, 1863, Post Commander, Headquarters Fort Craig, New Mexico [Post CO] to Acting Assistant Adjutant General [AAG] Department of New Mexico, Letters Sent [LS] and Endorsement [End] Books, Fort Craig, N.M., March 31, 1854–August 16, 1864, Army Continental Commands, Record Group [RG] 94, National Archives and Records Service [NARS], Washington, D.C.. Hereafter, Roll 1, LSEB.

3. Ltr July 9, 1864, Post CO to Commanding Officer, District of New Mexico, Santa Fe, N.M. [CO DiNM], Roll 1, LSEB. The elevation of the building was projected at 20 feet, width at 66 feet, and length at 112 feet ("Rough Plan for Hospital," July 7, 1864, received at DiNM on July 14, 1864, Letters Received, District of New Mexico, Santa Fe, New Mexico, Army Continental Commands, RG 393, NARS, Roll 22, Microcopy 1120, Enclosure to B323-DNM-1164, copy courtesy of Jerry D. Thompson, Laredo State University, Laredo, Texas).

4. See Chapter 10, this volume, for Col. and Bvt. Maj. Gen. William B. Hazen's assessment regarding the condition of the buildings at Fort Craig. Hazen was the post commander at the time.

5. End September 14, 1868, by Chief Medical Officer, District of New Mexico, Santa Fe, New Mexico [CMO DiNM] on Acting Assistant [AA] Post Surgeon's [Surg] letter September 6, 1868, to CMO DiNM; September 15, 1868, AAG DiNM to Post CO; 361 September 23, 1868, CO to DiNM, Letters Sent and Endorsement Books, Fort Craig, New Mexico, August 17, 1864–December 29, 1870, Army Continental Commands, RG 94, NARS. Hereafter, Roll 2, LSEB. Unfortunately, the post surgeon's letter is missing from the Fort Craig documents.

6. There are two plans of the new hospital. They are exactly the same, except that one of them includes a list of specifications ("Dimensions etc of proposed Hospital Building," IV); it is probably the plan that went forward with the post surgeon's letter of September 6, 1868. Hereafter, 1868 Plan. The other plan is given a date of 1869 by NARS ("Plan of two wards at hospital," Records of the Corps of Engineers, RG 77, NARS). Two pages of specifications originally accompanied the plan but have been lost by NARS (telephone conversation between the writer and Deborah W. Lelansky, Cartographic and Architectural Branch, NARS, April 19, 1994).

7. Billings 1870:246.

8. 1868 Plan; Billings 1870:246. The 1868 proposal suggested that the ventilator boxes were to be constructed of "thoroughly tarred wood, of a pyramidal form: 18 in. in length 12 in. in breadth on the inner face of the wall and 3 in. on the outer face, deep enough to project slightly upon both faces." The six that were finally placed in the roof ridge would have been cheaper, and would have eliminated the need for potentially costly repair where the walls were pierced to insert the ventilators.

9. "Report on condition of public buildings at Fort Craig Letter of July 20, 1869," Quartermaster General Consolidated Correspondence File containing Letters Received by the Post Quartermaster (1882) and Letters Received by the Fort Marcy Quartermaster (1865–1867), Office of the Quartermaster General [QM Roll], RG 92, NARS. Hereafter, AR 1869, QM Roll.

10. End 836, October 16, 1869, CQM DiNM to [CO ?] DiNM, Roll 2, LSEB; AR 1869, QM Roll.

11. End 880, November 24, 1869, by Post CO on letter of Post Surg to ? DiNM, Roll 2, LSEB. The post surgeon's letter is missing, but the brief and endorsement cover the essentials. The civilian mason employed was William Ales, a 40-year-old Englishman whose 18-year-old New Mexican wife and 2-month-old son were living with him in a "private residence" 100 yards northeast of the post (Ninth United States Census [1870] – New Mexico: Santa Fe and Socorro Counties, Records of the Bureau of Census, RG 29, NARS. Hereafter, Census Records). Also, see "List of Buildings on the government reservation Post of Ft. Craig N.M. not occupied or in use for public service, location of buildings with name and occupation of inmates of same, December 18, 1869," Letters Received, Fort Craig, New Mexico, 1854–1885 [LR], Army Continental Commands, RG 393, NARS, Frames 787–788, Roll 3. These buildings are on the 1869 ground plan of the post.

Ground plans consulted in writing this chapter include those from 1869 and 1882 (Cemeterial File, Report and Maps of Fort Craig, NM, Adjutant General's Office [AGO], RG 94, NARS; Miscellaneous Forts, Fort Craig, NM, #6, RG 77, NARS) and 1883 (QM Roll).

12. End 942, December 18, 1869, CQM Department of the Missouri, Fort Leavenworth, Kansas [DMo] to ? DiNM; End January 7, 1869 [*sic*], ? DiNM to Post Surg, Roll 2, LSEB.

13. Billings 1870:246. According to the post quartermaster's "Report of persons and articles for September 1870," William Ales had been hired December 1, 1869, and discharged September 10, 1870; in September, he was paid $2.40 a day for 9 days plus "overwork 2 hours each day for 9 days @ .60" (QM Roll). The post returns state that Ales was paid $2.20 per

day in December 1869 and January 1870, $2.40 per day from February through June, $75.00 for July, and $2.40 (per day) for August and the days he worked in September; the overtime rate on all returns was given as 30 cents per hour (Fort Craig, N.M., Post Returns, March 1854–June 1885, Returns from U.S. Military Posts, 1800–1916, Records of the Adjutant General's Office, RG 94, NARS. Hereafter, PR with month and year).

14. Billings 1870:246.

15. Ltr August 3, 1871, Post CO to Acting Assistant Adjutant General [AAAG] DiNM and Ends 1/1512, August 8, 1871, to CQM DiNM, B 844, August 10, 1871, CQM DiNM to AAAG DiNM; and 1/1543, August 11, 1871, AAAG DiNM to Post CO, LR, Frames 967–969, Roll 3. Also, LS 141 in LS 1, Frame 68, Letters Sent, Endorsements, Telegrams, 1870–1885, Fort Craig, N.M., Army Continental Commands, RG 393, NARS [hereafter, LS 1, EB 11 or III], where the date of the letter is August 4, which is probably the correct date.

Garrison strength at the time was 36 enlisted men and one officer of Company K, Fifteenth Infantry (PR, August 1871).

16. On December 26, 1870, the reception of General Order 118, November 23, 1870, AGO, was noted in the "Official Communications received" column of the post returns, but the purpose of the order was only stated as regulations applying to running army hospitals (PR, December 1870). "Estimate of Building Material, labor, &c., for repair of Post Hospital at Fort Craig N.M. in the Fiscal Year ending June 30th, 1874," forwarded by Post QM June 11, 1873, to the Quartermaster General [QMG], Washington, D.C. Lumber was estimated at 4 cents a foot. The rest of the estimate appears to be related to nine rooms of the old hospital. Labor was figured altogether and included $132.00 for two masons (30 days at $2.20 each a day), $17.50 for two carpenters (extra-duty enlisted men for 25 days at 35 cents each per day), and $24.00 for four laborers (extra-duty men) at 20 cents per day (QM Roll).

8th End, August 22, 1873, Medical Director, Department of the Missouri, Fort Leavenworth, Kansas (MD DMo), to AAG DMo, 9th End, August 27, 1873, CO DMo to AGO, 10th End, CQM Military Division of the Missouri, Chicago [KivMo], September 1, 1873, to CO DivMo, 12th End, September 8, 1873, AGO to QMG, Washington, D.C., and End July 17, 1874, QMG, Washington, D.C. to ?, QM Roll. The division medical director was Glover Perin, who was post surgeon at Fort Craig from September 13, 1855, to sometime in February 1857 and again from October 1857 until April 23, 1860 (PR, September 1855–April 1860).

Also, 8th End, August 20, 1874, Post QM to CQ DiNM. The district commander noted in the 10th End, August 25, 1874, that Fort Craig *"possesses No Military importance"* (QM Roll). The estimate for repairs for the fiscal year ending June 30, 1875, went forward with this correspondence.

17. End 344, November 9, 1873, on letter of Post Surg, October 29, 1873, to Post Adjutant, Headquarters, Fort Craig, N.M. [Post Adj], LS I, Frame 360.

18. Ltr July 4, 1875, Post QM to QMG, Washington, D.C., in "Case of Annual report of Lt. Kinzie on condition of public buildings at Ft. Craig, NM – new floors &c needed . . . Extract from Annual Report . . . .," QM Roll. Which ward had been finished was not stated.

19. End 174, April 22, 1875, by Post CO on letter of Post QM, April 20, 1875, to Post Adj, and End 3, April 30, 1875, CQM DiNM to Acting QM Dmo; End 9, May 18, 1875, DivMo to DMo; End 13, May 29, 1875, CQM DiNM to Post Adj, all contained in End 218 received at Fort Craig on June 4, EB 11, Frames 553, 567. End 217 received at Fort Craig on June 1, 1875, from CQM DiNM directed that the amount appropriated for "Hosp. repairs" be spent before the end of the fiscal year; this was not part of End 218, EB II, Frame 566.

20. End 189, May 2, 1875, CQM DiNM to Post Adj, and End 196, May 5, 1875, on letter of Post Adj May 4, 1875, to CQM DiNM, EB 11, Frames 557, 559. End 19, January 29, 1876, on letter from R. H. Stapleton, Citizen, then at Fort Craig, January 1, 1876, to Post Adj, 2d End, January 3, 1876, "late A.A.Q.M." to Post Adj; 3d End, January 4, 1876, Post Adj to Post CO; 6th End, January 6, 1876, Post CO to AAAG DiNM; End 43, January 13, 1876, CQM DiNM to Post QM received at Fort Craig on January 19, EB II, Frames 640–641. Irishman R. H. Stapleton later became a Socorro businessman. His sometimes rocky relationship with Fort Craig is worthy of an in-depth study; he was about 47 years old at this time (Tenth U.S. Census [1880] – New Mexico: Santa Fe, Socorro, Taos, and Valencia Counties, Census Records).

21. End 116, March 5, 1876, on letter of Post Surg, March 3, 1876, to Post Adj, and 1st End, March 3, 1876, Post QM to Post CO; End 140, March 19, 1876, CQM DiNM to Post Adj, EB 11, Frames 681, 692.

22. "Estimate for a Shingle Roof on Post Hospital," June 19, 1877, LR, Frame 456, Roll 5. The post commander approved the estimates on June 23, covering more than 7,000 feet of various sizes of lumber, 1,000 adobes, and 40,000 shingles; the total cost was $718.16.

23. Ltr July 21, 1877, Post QM to Post Adj, in "Case of condition of public buildings at Fort Craig, NM. Extract from Insp report," QM Roll.

24. End August 15, 1877, AAG DivMo to CO DMo; 2d End, August 20, 1877, CO DMo to AAG DivMo, QM Roll.

25. End 345, May 26, 1881, Post CO on letter of Post QM, n.d., EB III, Frame 281; Special Order 4, August 27, 1880, Headquarters, Fort Craig, N.M., General Orders, Special Orders and Circulars, April 1854–June 1885, Fort Craig, New Mexico, Army Continental Commands, 1821–1920, RG 393, NARS. Hereafter, Orders with number and date.

26. Ltr July 12, 1883, QMG, Washington, D.C., to CQM DivMo; the letter was received at Fort Craig on August 2 (LR, Frames 636–637, Roll 6). The estimates are missing from the post documents. Ltr 520, November 25, 1882, Post CO to AAAG DiNM, LS I, Frame 728.

27. "Plan of Post Hospital Fort Craig, N.M., March 22d 1884," Consolidated Correspondence File, Quartermaster General, RG 92, NARS. Hereafter, Post Hospital, 1884.

28. Ltr April 12, 1883, Post QM to QMG, Washington D.C., in "Annual Inspection Report for public buildings and transmits estimates and Plans for Repairs of Barracks and Quarters and New Buildings," QM Roll.

29. Post Hospital, 1884.

30. Ltr 198, July 27, 1883, Post Adj to Post Surg, LS I, Frame 792; O 168, October 20, 1883, Orders. Government employees were entitled to health care at a daily rate.

31. Ltr April 12, 1884, Post QM to QMG, Washington, D.C., in ". . . Annual Inspection of public buildings made March 31, 1884," QM Roll.

32. Ibid.

33. Ltr August 27, 1884, Post QM to CQM DiNM, LR, Frames 68–71, Roll 7.

34. Charges and Specifications against Sgt. G. M. Liggett, Troop M, Fourth Cavalry, April 12, 1884, and Charges and Specifications against Pvt. Robert Murphy, Troop M, Fourth Cavalry, April 12, 1884; the dates of the dereliction of duty in both cases were April 5 and 6 (O 137, September 19, 1884, Orders; Ltr September 24, 1884, Post Surg to Post Adj, LR, Frame 91, Roll 7).

35. "Annual Inspection report, Public Buildings Fort Craig, NM on 31 day of March 1885, with estimates for additional alterations and repairs for the fiscal year commencing July lst, 188-.," QM Roll.

36. The 1965 photograph belongs to the writer. The story about the fall of the last corner was told by Lou Batsell, one of the volunteer excavators during the 1993 excavations.

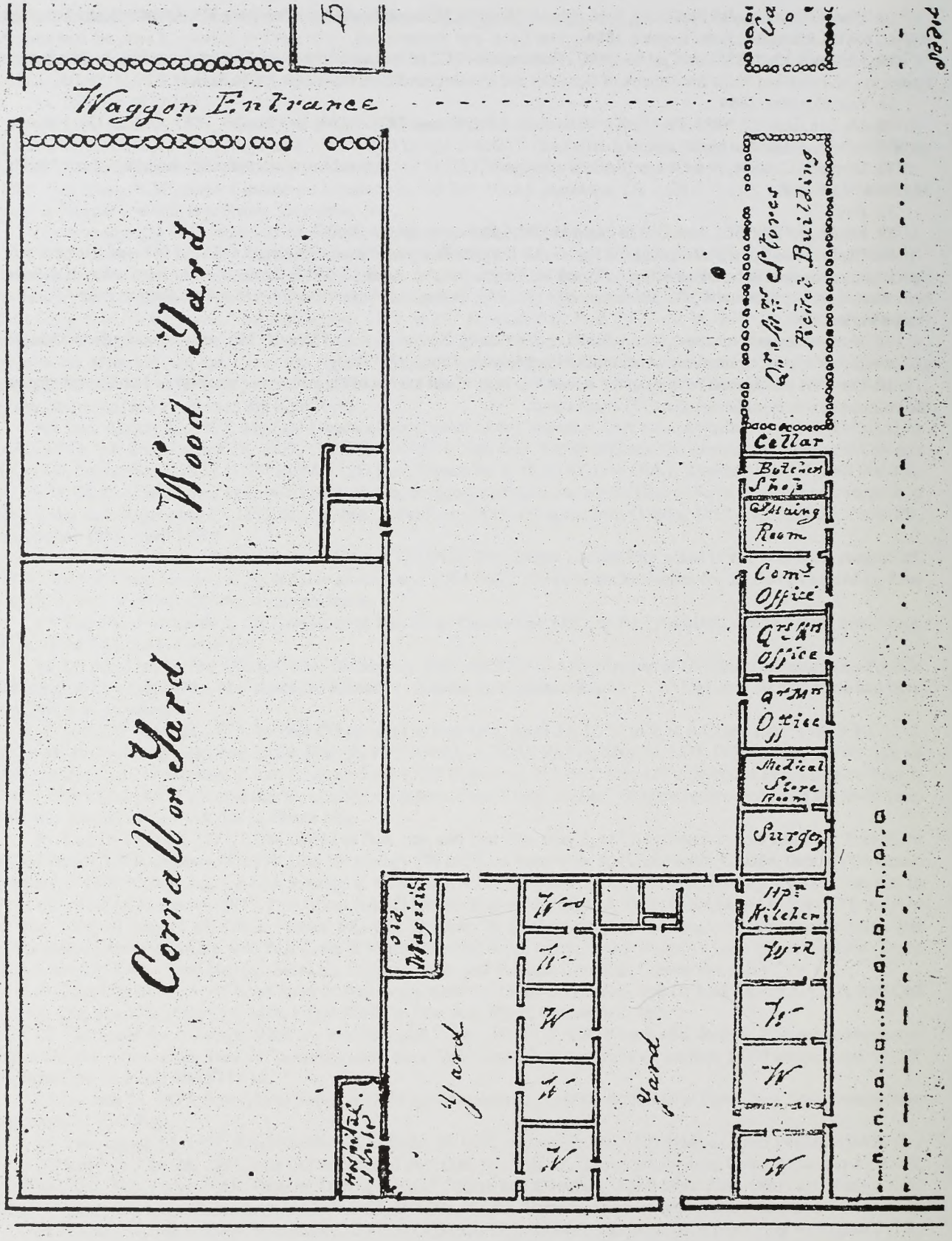


Figure 13.1. Enlargement of the 1865 plan of the old hospital.

Chapter 13

THE OLD HOSPITAL, HOSPITAL ROW, & THE TELEGRAPH OFFICE

Marion Cox Grinstead



IT IS IMPOSSIBLE TO DETERMINE the exact dates of construction of the Fort Craig hospital, except to say that it was probably at some point in 1854, the year the post was established.[1] In fact, almost no information about the hospital exists in the documents for the following six years.

There is, however, ample evidence from post return entries that a hospital was operational. Except for a six-month period in mid-1857 and a shorter period in 1860, a surgeon was on duty during the entire military occupation. In January 1860, two men from Fort Buchanan were sent to the Craig hospital to improve their health. In April of that same year the surgeon was transferred, leaving Fort Craig without medical care. When the new post commander arrived on July 9, he immediately wrote the assistant adjutant general at department headquarters in Santa Fe requesting a surgeon, but if one were not available, he would settle for a "Competent" hospital steward. A new surgeon arrived the following month.[2]

THE OLD HOSPITAL

A long adobe building that faced the parade ground and comprised twelve rooms in two structures as well as a cellar was constructed on a north-south axis. Beginning at the north end in the west building, seven of the rooms were devoted to hospital use. (The remaining five are discussed as the "Hospital Row" later in this chapter.) The 1865 ground plan shows four wards, a kitchen, a surgery, and a medical storeroom running from north to south (Figure 13.1).[3] Fronting the rooms was a porch that extended as far south as the north wall of the storeroom. A line of trees just west of the porch was planted during the Civil War, but they survived only until the early 1870s.[4]

The main entry was evidently between the two northern rooms; a hall ran from west to east between those rooms with a door at each end. There was no door between the surgery and the kitchen, but most of the other rooms were connected by doors near the front (west) wall (with the exception of the north room, where the doorway was either close to the east wall or in the middle). Only one exterior door into the surgery is shown, on the front wall. The door from the surgery into the storeroom was also near the west wall. No windows were drawn on either plan, but photographs show them to have been six over six panes, probably double-hung, and set close to the ground.[5] Although it is difficult to be certain, there seems to have been at least one window in the west wall of each room except for the northernmost room where there were two.

Chimneys were neatly lined up in a row on the roof with one being considerably larger than the others, but no fireplaces were drawn on the plans.

One other doorway besides the hall door opened into a small, enclosed yard on the east side of the seven rooms depicted on the 1854 plan. On the east side of the yard was a row of four or five adobe rooms. All are marked as wards on the 1865 plan. Only one interior doorway—between the southernmost room and the next room—is shown. Two rooms have doorways into the yard. The same plan also shows an ell of two small rooms on the south wall of the yard with a door from what appears to be a short hall opening into the hospital yard. The 1854 plan shows no hall and a door in the west wall (see Figure 10.2). A gate in the south wall led to a large open area used by the quartermaster. A gate in the north wall led to the ditch dug around the post after the Battle of Valverde.

Another small yard lay east of that building. All the rooms except the southern one had doorways into that yard. The 1865 plan shows the old magazine against the southeastern corner of the yard. On the 1854 map the building is labeled a cellar, and by 1869 the structure had disappeared from the plans. There was a gate into the quartermaster's yard between the magazine and the wards. The entry to the hospital privy in the northeastern corner of the wall was in the east wall of the yard, but the privy itself extended into the corral behind it.

The first mention of hospital disrepair in the records is in an early March 1861 letter from the post surgeon reporting that an unspecified number of fireplaces were badly in need of repair. The post commander directed that the repairs be made, but there are no documents indicating what work was done.[6]

On February 21, 1862, the Battle of Valverde was fought at a river crossing about 6 miles north of Fort Craig. At the end of that brutal day, 68 men had been killed and 160 wounded. Seventeen of the wounded later died.

The small hospital was overwhelmed. Wounded men were housed in rooms all over the post. A battle participant noted on February 24 that Dr. Basil Norris was up to the task at hand, and that Dr. J. H. Bell was rather peculiar, preferring to amputate rather than try to save a limb.[7] The writer gave his opinion that care was excellent, and the rooms used as wards were "cool," meaning, presumably, well ventilated.

The day after the battle, the participant recorded his visit to the hospital dead room (morgue):

> I have been to the room where the dead are *piled up* looking for one of our boys who is missing. . . . Never did I expect to go into a room where there were fifty men piled upon another climb over them rolling them over seeking for a friend and this too without a shudder. . . .[8]

Some of the illnesses treated in February 1862 that were not gunshot wounds, contusions and abrasions, or dislocations included intermittent fevers (Quotodiana and tertiary, 12 cases), erysipelas (1), variola (5, 1 death), varioloides (10), colica (1), constipatio (11), diarrhoea and dysenteria (both acute, 14), dyspepsia (7), tonsillitis (5), gonorrhoea (24), nephritis (1), syphilis primitiva and consecutiva (14), rheumatismus acutus (27), and ophthalmia (5).[9]

An intriguing reference to more than one privy is found in a late December endorsement on a request by the post surgeon to have the sinks cleaned out. Evidently, he and the officer of the day clashed over the chain of command because the surgeon was directed to go through "*the proper channel* for any requirements to Hospital."[10] Neither ground plan shows more than one privy.

In mid-March 1863, the post surgeon received a letter from the department medical director enclosing diagrams of proposed changes to the existing complex. Apparently, there was a lack of room in the hospital. Unfortunately, neither the letter nor the diagrams are in the Fort Craig documents; however, the post commander's answer is.

If the two early plans are accurate, the proposal would have moved the kitchen into the medical storeroom. As the commanding officer pointed out, that would have placed it next to the quartermaster's

office, thus making it open into the "Main yard" used for quartermaster business. Emptying the kitchen slops would involve a long trek through the quartermaster yard, or around the southeast bastion. The room proposed for the surgery would close the only door to the east wards across the hospital yard. One of those doors to the back row of buildings was in the hall, the other in the kitchen. It appears that the proposal was to move the surgery into the currently used kitchen because the post commander stated that patients would either have to go through the proposed surgery or go around through the quartermaster's yard to reach the east wards. His other complaint was that the room would be too small for use as a surgery.

Instead, the commanding officer made suggestions of his own. The surgeon had already moved the hospital matrons into tents, thereby freeing up two rooms he intended to use as wards. The surgeon believed the change would give him enough room for the moment. Two other rooms were full of ordnance stores that would be moved into the new magazine in the parade ground once it was finished. The removal of stores from the old magazine (hospital cellar) would free the second yard in which a room could be built if necessary. The commander suggested that a new privy be built in that yard away from the wards and kitchen. In his opinion, the privy was too close to both to be "agreeable." Where that privy was is open to question, since only one (near the old magazine) was drawn on either plan, and it was some distance from the buildings. It may have been in one of the two rooms on the south yard wall between the east and west buildings. The arrangement of those rooms is odd, and they are close to the kitchen and east wards;[11] or, it may have been in front of the bastion.

On June 15, 1863, the post quartermaster was directed to furnish the men and lumber for some unspecified repairs to the hospital. The following day, the surgeon asked for the means to remove drifted sand from the front of the building. Two wagons and the necessary work detail were sent at reveille the next day to take care of the problem.[12]

Barrels were requested by the surgeon on June 20, and the quartermaster was directed to furnish them. The endorsement provides no clue to the use of the barrels, but a circular issued on June 26 may do so. Despite the proximity of the Rio Grande, a source of good drinking water was always a problem at Fort Craig. The circular ordered company commanders to provide barrels for filtering the drinking water. The post quartermaster was constructing the filters and furnishing the necessary charcoal. A recommendation was made that the companies buy *tinajas* or *ollas* to hold drinking water.[13] It is possible that the idea originated with the surgeon, and he needed the barrels for the hospital, or they may have been necessary for trash disposal.

The soldier detailed as cook in the hospital was not doing his job at the end of June, but the surgeon was informed that no details could be made except the ones already in place. He was invited to prefer charges against the man if he was not satisfied with his performance, but this does not appear to have been done.[14]

The surgeon asked for a carpenter "for a few minutes" on July 3. One was sent by the quartermaster, but again, there is no description of the work the doctor wanted done.[15]

On July 14, plans and estimates for a new hospital were sent to department headquarters in Santa Fe. Even though it was understood that the hospital at Fort Craig was too small, the idea was rejected.[16]

Twenty-one rules for the operation of the hospital were published in November 1863. They provide clear evidence of the problems encountered in running a military hospital on the nineteenth-century American frontier.

On admission, each patient was sponged "all over" with lukewarm water. His feet were washed in a bucket of warm water. After that, he could be put to bed. The rules specified that the bedding was to be clean "so as to give the poor, suffering, relief seeking man some comfort."

Nurses were required to deliver meals and medication to those who were not ambulatory, but they were also responsible for the cleanliness of their assigned ward as well as for keeping the fires going, even at night if necessary. They were directed to open doors and windows between the hours of ten in the morning and two in the afternoon unless the doctor ordered otherwise.

Bedding was changed at least twice a week. Each Saturday morning at ten, soiled linen was turned

over to the hospital steward, who issued clean bedding "piece for piece."

Morning rounds were made at 8:30, afternoon rounds at 3:00. The steward, the ward master, or the nurse was required to accompany the surgeon on rounds.

Everyone on duty at the hospital and all visitors had to keep their hats off "because it is the duty of every member of this Hospital, to pay a certain regard to the Institution in which he hopes to get his health once more restored." The visitors, according to the rule, "owe a regard to the poor fellow soldiers, who are suffering from disease or wounds contracted in the Service of our beloved Country."

Ambulatory patients were required to get up at 7:00 A.M. and make their own beds, and were admonished not to lay down again with their shoes and clothes on. They could return to bed if ill, but if caught dressed and on the bed, they faced severe punishment.

Visiting hours were between 10:00 A.M. and noon and from 1:00 to 5:00 P.M. The surgeon said he was happy to have callers visiting the ill, but he absolutely could not extend the hours past those given. However, if someone was suddenly leaving or arriving at the post, the doctor said he would bend the rule.

Gambling, an army-wide problem, was strictly prohibited in the hospital. The rule, Number 11, is worth quoting at length:

> Gambling . . . brings on dispute and sometimes deplorable consequences, depriving mans of the necessity [*sic*] of life, and creates desperadoes. It is the wish of the attending Surgeon that there be '*Harmony' Brotherly* love among those suffering together, and he requests all under him to be polite to each other, to live together friendly, endeavoring to pass the time among themselves as pleasant as possible. . . .

The good doctor recommended reading "instructive books—The holy Bible," or even playing cards as long as they did not bet on them.

Smoking was strictly prohibited, even in the dining room. So was loud talking, whistling, singing, "or playing any sort of instrument." Severe punishment was promised for any violations.

Meals were served at the prescribed time for the garrison. Forty-five minutes were allowed for the meal, after which the wards and dining rooms were cleaned. No food was allowed anywhere in the hospital between meals.

The kitchen was closed to all but the cook so he would not be distracted from his duties. The cook was responsible for the cleanliness of the kitchen, the cooking utensils, and the dining room. He was also required to conserve rations and forbidden to dispose of anything for his own benefit. Everything was kept under lock and key.

Five people only were allowed in one ward, the attendant included. Arms, equipment, and especially ammunition were to be left with the patient's unit. Shoes, knapsacks, and personal items were not to be hung up in or left lying around the wards. Instead, such items were tagged with the patient's name, rank, regiment, and date of admission and placed in the hospital storeroom.

"Spitting on the floor—as by itself—is a disgusting habit, which brands a man who does it—as one who has no education" proclaimed Rule 21. Spitting was "strictly forbidden." Punishment was swift: discharge from the hospital at once, either to duty if able, or to quarters if not. The closing sentences note that the rules were meant to stop the spread of disease by providing ample ventilation, uncrowded wards, and "scrupulous cleanliness."[17]

Nothing further regarding the hospital appears in the records until June 1864. On the twenty-third of that month, the quartermaster, under the supervision of the surgeon, was ordered to put a "windlass frame" in the surgery wall.[18]

Five days later, the surgeon asked that a small shelf for a washbasin and pitcher be constructed. A door

was also cut. The wording of the order is ambiguous: "The A.A.Q.M. will have a small Shelf and Door constructed in a corner of the Surgery as may be directed by Surgeon G. H. Oliver for wash Bowl and Pitcher." According to the 1854 and 1865 plans, the surgery could only be entered from the west. Another door in the room led to the storeroom. The door that was cut was undoubtedly the one in the northeast corner of the room that was found during the 1994 archeological season. At a later point in time, the doorway was closed up again.[19]

The surgeon and the post commander collaborated on a plan for a new hospital and forwarded it to Santa Fe on July 9, 1864. The argument for a new facility included the fact that the hospital was inadequate because the rooms were too small and proper ventilation was impossible. The complaint that the rooms were "too low on the ground" referred to the floors being laid directly on the ground surface. No provision was made for patients to sit or walk; there was no shade and no way to enjoy the afternoon breezes, either. The proposal was not looked upon favorably in Santa Fe.[20]

Sometime before late July, the wall between the hospital and a corral collapsed. The wall in question was probably the one with the privy and the old magazine. The quartermaster was ordered to rebuild it on July 27.[21]

At the request of the surgeon, "a bath tub and shower bath" were built in the hospital by the quartermaster in mid-August. Unfortunately, the surgeon's letter making the request is missing, and the order directing the construction did not say where the tub and shower were placed.[22]

In one of the rare references to fire prevention, an order dated April 15, 1865, noted that the haphazard burning of manure, rubbish, and bed sack contents (probably straw) was creating dangerous conditions around the buildings. Henceforth, all rubbish would be thrown into one of the many holes around the outer walls and covered with dirt. Officers were particularly enjoined from disposing of hot ashes without first watering them down. Practices concerning bedding disposal at the hospital were especially addressed.[23]

On April 24, Fort Craig acknowledged the receipt of the department medical director's endorsement on the surgeon's request to have a "portal" built. But the request is somewhat curious. A porch was in place in an 1865 photograph, yet in 1868 another request was made because the original had been cut down for fuel in 1862. The project may have been denied in 1865, or the portal the surgeon asked for may have been intended for another part of the building.[24]

Three days later, the commanding officer notified the quartermaster that the surgeon was anxious to get the hospital whitewashed. Masons were instructed to begin the job as soon as the new magazine was completed.[25]

For some reason not clear in the records, department headquarters instructed the post commander to personally inspect the storehouses, magazine, shops, and the hospital every day. All of the staff officers involved were informed of what must have been a new procedure at the post.[26]

In mid-November, Fort Craig loaned surgical instruments to the doctor at Fort McRae for an operation at that post. The commanding officer asked that they be returned immediately by the same men he sent them with because "There is no other Set of Instruments at [Fort Craig], and we cannot do without them."[27]

On March 31, 1866, the surgeon reported that during the previous six months he had treated 47 cases of bronchitis, 32 of syphilis, 24 of diarrhea, 22 of rheumatism, and 10 of remittent fever. According to the doctor, the mean strength of the garrison during the reporting period was 16 officers and 287 enlisted men. He also noted the recent occurrences of scurvy and purpura, stating that there had been several cases. Eleven days later, one man died of purpura.[28]

If the records are to be believed, no repairs or modifications to the hospital or to any other structure were made in 1866. Yet, a carpenter and one to three civilian masons worked at the post from December 1865 until December 1866. One enlisted man working as a stonecutter was attached to Fort Craig from April 5 until sometime in July. Construction of the new bacon house began in the middle of August 1865, worked on sporadically, and was completed in mid-April the following year. This probably accounts for the carpenter,

masons, and large number of civilian laborers working at the post; since the building was adobe, perhaps the stonecutter worked on the foundation. It would be folly to think the hospital and other buildings did not require patching up, but there is no indication of any work done during 1866.[29]

On June 17, 1867, the surgeon and the quartermaster sharply disagreed about the stability of the storeroom roof. The doctor asserted it was in danger of collapsing any minute and worried that the hospital stores would be destroyed. He was also convinced that if it did not collapse, it would surely leak badly and damage some of the stores. The quartermaster believed there was no chance it would fall anytime soon, but he did acknowledge that it would leak during a heavy rain lasting longer than a day, "as all the roofs in this post will." The commanding officer was invited to inspect it for himself, and then the quartermaster modified his tone somewhat by saying he had ordered "additional props" put in during the afternoon. In his endorsement, the commander directed the quartermaster to get the repairs made "as soon as possible."[30]

Two companies of the 125th U.S. Colored Troops had arrived at Fort Craig the previous October, necessitating the separation of the wards into white and Negro, according to the practice of the time. On August 24, 1867, the surgeon requested the assignment of an enlisted man as nurse for the white ward because the other nurse had been discharged.[31]

The quartermaster wrote to Santa Fe on November 13 about the state of the jaspe floors around the post. On November 20, the district quartermaster directed that an estimate for the repair of floors in the officers' quarters, storehouses, and hospital would be submitted and, specifically, would include the cost per fanega for jaspe. An estimate for changing the flooring to wood was to be included.[32]

An endorsement dated December 10 returned a corrected version of the estimates to the district quartermaster and stated that the jaspe for the hospital was intended to repair the floor in the "Jaspe Wards." An endorsement made the following day remarked that it was believed the post could get jaspe on its own in a month or two "if we are allowed to Keep the *Mason,* who is the only person around here who understands making and putting it down." The requisition for jaspe had been made with a view to eliminating the labor necessary to burn, grind, and mix it with water, a process not well understood by nonlocals. The saved labor could then be used for getting the "post in good repair sooner."[33]

A photograph of the building taken in early October 1867 shows a sorry-looking structure with badly peeling plaster and facing a weedy parade ground (Figure 13.2). The chimneys and porch, however, appear to be in reasonably good condition.



Figure 13.2. *1867 photograph of the old hospital (courtesy of the National Archives).*

Sanitation was addressed on March 9, 1868, when the quartermaster was ordered to send a cart and a detail of prisoners every morning to the hospital to haul slops and trash to a point away from the buildings. It was a post-wide directive, and the garrison was reminded that throwing any refuse on the ground was "strictly forbidden."[34]

Early in May, the commanding officer reported that even though work was well under way, he was of the opinion that it would take six months to put all of the structures in good repair. Late in June, he wrote that "Fort Craig has to be literally dug out of the ground."[35]

Between the time of those two letters, the surgeon was assured that the shelving he wanted for stores would be put up as soon as the job could be gotten to, and that "[the] floor for the Colored ward" would be put in. There is no indication of what kind of flooring was to be installed, but the material used probably had something to do with the jaspe mentioned the previous December.[36]

The commander's June letter remarked that the hospital had had a good portal until Colonel Carson had cut it down for fuel.[37] Since the portal was in place when the 1867 photograph was taken, he must have been referring to the rooms south of the hospital, which will be discussed later.

Evidently, expanding the existing hospital in some way had been authorized prior to September 1868. Open agitation for new wards surfaced again early in September when the surgeon submitted a plan for consideration. The chief medical officer of the district concurred, citing the long-held conviction that the old facility was cramped and poorly ventilated. All work on the hospital was stopped pending further orders from district headquarters. An endorsement from Fort Craig stated that no work had been done as yet on the hospital and reiterated that the hospital was "limited and old." The construction of two wards in a new building was authorized sometime after the middle of September.[38] During the year, the hospital probably relinquished the old medical storeroom when the addition to the rooms south of it was constructed.

A new surgeon arrived at the fort in April 1869 and presided at the birth of the post commander's daughter. The doctor also noted an opening (gate) in the 10-foot-high defensive wall near the hospital and east set of officers' quarters, but he did not mention the new wards, which should have been under construction by the time he arrived at Fort Craig.

He graphically described the biting sandstorms in the area and told about one that blew up one day while he and the steward were doing monthly reports in a closed room. When the wind stopped blowing, the two men left clearly visible footprints in the collected dust on the floor.

The doctor described his effort to provide decent drinking water for the hospital. His approach consisted of kneading a big ball of jaspe, charcoal, and cotton batting into a stiff paste. When it had hardened, he drilled a hole in it, inserted a rubber tube, and put it in an 8- to 10-gallon tinaja covered with a blanket and hung the jar in the hall. The water seeped through the walls of the tinaja, dampening the blanket and cooling the water. Below that arrangement, he hung another tinaja wrapped in a blanket and connected it to the first with more rubber tubing. The contraption became quite popular all over the post.[39]

In July 1869, the usual annual spurt of summer repair activity began. On July 10, a recommendation to hire a mason for fifteen days to repair the roof was forwarded to Santa Fe. The commanding officer thought the rest of the re-roofing could be finished by a detail of enlisted men from the garrison. In a garbled reply, the chief quartermaster stated that only three civilians could be employed at Fort Craig at present, because authority for more had to come from the military division. Until such time, he believed the troops could cover the roof with jaspe with little difficulty, even though he admitted it would be better done by a mason. And, it had better be done before the rains began. The request was sent back to the post marked "disapproved," but the roof undoubtedly was covered with jaspe using soldiers' labor.[40]

The annual inspection made on July 20 noted two small buildings of "irregular" material that needed roofs, and associated adobe outhouses in poor condition. The capacity was 12 patients. The new wards barely had walls up.[41]

On October 18, 1869, the post surgeon requested the quartermaster furnish him with "permanent quarters." The letter was referred to the commanding officer, who replied that the doctor was entitled to select quarters after the commissioned officers had chosen theirs. Where the doctor was living is not known, but it sounds as though he was hoping to be assigned to one of the three sets of officers' quarters.[42]

An estimate for repairs went forward sometime in April 1870. The endorsement made by the district quartermaster on April 30 stated that a previous estimate had been received and rejected by the chief quartermaster of the Department of the Missouri on December 18, 1869. The reason for the rejection was the anticipation that the post would be closed in the spring of 1870. He recommended that only the work that could be accomplished by a civilian mason and the troops be authorized since abandonment would make it unnecessary to buy the materials to repair the buildings.[43]

In a report published on December 5, 1870, the second surgeon who served at Fort Craig collaborated with the two surgeons then serving at the post on a wide-ranging sketch of the area and the fort. The doctors described the "old hospital" as consisting of two adobe buildings 40 feet apart, one measuring 15 by 90 feet and the other 20 by 90 feet. The only hallway in the buildings separated the two wards; the rest of the rooms were reached internally through connecting doorways. Each ward was 20 by 20 by 14 feet with two windows in front and two in back of each room, each measuring 4 by 2½ feet, making the rooms poorly lit and ventilated. No method of roof ventilation was in place. Each ward contained 8 beds with 700 cubic feet of air per bed. Open fireplaces provided heat. At the time the report was compiled, the buildings were considered plastered and in good repair.

Apparently, the shower and tub built by the post quartermaster in 1864 had been removed because the surgeons reported no bathing facilities existed. An office occupied the room intended as a dispensary. A small room used for the dead room was also used for the storage of lumber and fuel wood. One privy was about 15 yards from the hospital, indicating that it might still have been in front of the southeast bastion. The yards were graded and well drained by wood pipes leading to the outside ditch. The surgeons concluded that the retention of the old building was a necessity because the new building was intended only for wards.[44]

The only document available for 1871 is a letter from the post commander to district headquarters asking that the two new wards be completed because the unfinished building was deteriorating badly. The letter was referred to the acting chief quartermaster (a paymaster), who returned it with the curious remark that the hospital "has always been considered suitable and sufficient for former garrisons . . . since it has been a post and . . . with a much larger force than is now present." His recommendation was to keep the roof on the new building in repair until the fate of Fort Craig was decided.[45]

Records for 1872 are equally sparse. Of general interest is the order to vaccinate the troops. The men were directed to march to the hospital when the surgeon called for them. Civilians working at the post were included.[46]

Estimates for post building repairs were made by the quartermaster in 1872, probably sometime in the spring. The quartermaster general in Washington, D.C., wrote on July 21 that the estimates for hospital repairs would be considered once they had been submitted separately, evidently a new requirement made by an army general order dated July 23, 1872. Presumably, the estimates were resubmitted after information of the requirement reached Fort Craig on September 2.[47]

The unusually brief annual inspection of the post made on July 11, 1873, found the hospital in "very poor repair being old, worn with the weather and leaky." All post outhouses were so dilapidated that immediate and extensive repairs were deemed critical.[48]

The estimate of materials needed to repair the hospital went forward with the inspection report. Some of the requested material was required to finish the two wards. Plastering and repairing nine rooms of the old hospital would require 150 bushels of lime. Sixty bushels of jaspe would be used to repair the roofs and floors of those rooms, indicating that both were still of that material, at least in large part. Repairs to walls

and outhouses [*sic*] would require 10,000 adobes and 800 feet of lumber. Lumber for shelving in the dispensary and storeroom would come to 1,000 feet. Labor included two civilian masons for 30 days, two extra-duty carpenters for 25 days, and four extra-duty carpenters for 30 days. Part of the labor would have been expended on the new building.

On August 22, the medical director of the Department of the Missouri returned the estimates, which had been sent to him for comment. Accompanying his endorsement was a sketch plan of the Fort Craig hospital along with suggestions for improving the layout and functions. The most interesting feature of the plan is the location of the hospital kitchen. By this date, it had been moved into the southernmost room of the east row of buildings. The dining room occupied the next room on the north. The medical director proposed building a new kitchen for about $300 adjoining the east side of the north ward in the first row of the complex and making that ward the dining room. If the new wards were ever completed, he thought it would be the most efficient arrangement. The old ward across the hall would be made into a dispensary under his plan, so the current dispensary (the fourth room from the north) could be used to hold sick call. With those changes, the estimate was approved. Whether or not the new kitchen was built or the rearrangement undertaken is not known.[49]

The department commander's endorsement on August 27 complained that the regulations requiring a separate estimate for the hospital had not been met, so no action could be taken on them. Thus, hospital repairs were not approved for the time being, but since the army was out of funds for repairs at all posts, it did not much matter.[50]

Complicating the return of the corrected estimates was the theft from the buckboard carrying the mail on September 11, 1873. Duplicates were forwarded on October 6.[51]

Funds were again available on July 14, 1874, so the estimates were resubmitted by the District of New Mexico and finally approved, until the quartermaster general heard about a flood on the Rio Grande and worried that Fort Craig had been washed away. He was assured on August 20 that the post was on a bluff well above the river. He had also stated that the post was of no military value, besides being run down, but admitted that if it remained active, it would have to be kept in repair. An endorsement from the chief quartermaster of the Department of the Missouri stated that he did not approve of the expenditure but was forwarding the estimate to the quartermaster general anyway, who finally approved the appropriation as long as it did not require the department to exceed the amount set aside for repairs. The War Department concurred on October 24.[52] Although there is nothing in this complicated series of letters to confirm it, the completion of one of the new wards in December and later correspondence show that some of the money requested for the hospital became available.

On December 7, the surgeon requisitioned two pine tables, and window sash and glass for the storeroom windows. The post quartermaster was directed to comply with the materials he had available.[53]

Sanitary measures were addressed again on January 14, 1874. In a letter to the post adjutant, the post surgeon asked that the interior of the hospital be whitewashed.[54]

The surgeon general's report published in 1875 said little more about the hospital than the 1870 report had. The new hospital was still not finished. Capacity in the old hospital had been reduced to four beds in each ward, allowing 1,300 cubic feet per bed.[55]

The estimates for the fiscal year ending June 30, 1875, were submitted on July 30, 1874. These documents, however, are missing from the quartermaster records.[56]

A letter written by the post surgeon on October 31, 1874, requested that a ward floor be repaired. The quartermaster replied that no jaspe was on hand. The letter was sent to Santa Fe on November 6 with the remark that the hospital floor was in a "very bad state of repair," but so were other floors around the post. The commanding officer noted that jaspe cost as much as lime, and he thought 15 bushels of jaspe would be enough to complete the floor repairs.

The chief quartermaster of the district returned the correspondence, remarking that recent orders prohibited spending money for repairs to barracks and quarters; however, he directed that an estimate for jaspe for the hospital floor be forwarded.[57] Undoubtedly this was done, and it may have been approved.

A letter from the Department of the Missouri dated November 18 notified the Fort Craig commander that $981.50 for hospital repairs had been authorized by the Secretary of War. The amount was based on the estimate forwarded on July 30, 1874, and will be discussed further shortly.[58] Three weeks later, the chief quartermaster of the district asked if the previously authorized funds for jaspe were still needed in light of the recently approved appropriation. The letter was referred to the post quartermaster on December 14, but his reply is missing.[59]

On December 22, the post surgeon asked that the hospital and all of the shingles at the recently abandoned post of Fort Tularosa be transferred to Fort Craig. Four days later, the commanding officer forwarded the letter but recommended that the removal wait until spring when the weather and roads would be better. The district commander feared that a delay in getting the material might force the return of a just-received special appropriation for repairs to the Treasury Department on July 1. In view of that, he directed "that the original Estimate should be adhered to."[60] Since the post surgeon's letter is just briefed in the endorsements, it leaves the circumstances a bit murky. Apparently the surgeon thought that if he could get the material from Fort Tularosa, he could save that much money from the allotted funds and spend the savings on other repairs.

In mid-March 1875, the post quartermaster was ordered to furnish as much of the material as he could for some unspecified repairs requested by the surgeon.[61] A week later, the quartermaster wrote to the district, wondering if the money he saved on lumber for hospital repairs could be used for other quartermaster needs. The chief quartermaster lost no time in replying on April 1 that funds for hospitals could not be used for any other purpose and that "completion and repairs" to the hospital could only be made from hospital funds.[62]

On May 26, the district quartermaster evidently reminded the Fort Craig quartermaster that funds for hospital repairs had to be expended before the end of the fiscal year. Three days later, he again wrote to the post quartermaster that authority had been granted by the Division of the Missouri to buy the necessary material for the repairs requested on April 20, when the quartermaster also asked for authority to use some glass in the new hospital that he had on hand. The latter apparently asked about other repairs as well. The commanding officer had endorsed his approval on the letter, saying he thought it was a good idea for "completing and repairing" the hospital.[63] Estimates for repairs to the hospital in the following fiscal year were forwarded on June 9, 1875, but are missing from the post records.[64]

The post quartermaster noted the completion of one ward, the hallway, roofing, and plastering of the new hospital in his annual report made on July 4, 1875, stating that he had received and spent $981.50 on the project. Included in his plans for July was the plastering of all the structures with a mixture of lime and sand.[65]

The expenditure of $981.50 on the completion of the new hospital alone is difficult to justify. The estimate forwarded the end of July 1873 and resubmitted in 1874 included funds for flooring, joists and sleepers, the ceiling, doors, windows, and window casings for the two new wards and totaled $208.00. Material to complete the central hall was not included in the estimate, and vigas supplied in March were not paid for until the following January. Estimated repair to the old hospital was figured at $389.50, for a total of $597.50 for both buildings. Added to that was $132.00 in projected labor costs for a grand total of $729.50, or $252.00 less than the appropriated $981.50. In an endorsement made on August 22, 1873, the department medical director noted that most of the $771.00 (i.e., $729.50) seemed destined for the completion of the new hospital. The wards, however, were not completed until some time in 1876, and if the $252.00 is added to the $729.50, the total is $981.50, an indication that the repair to the old hospital was funded and the money was not spent entirely on the two wards.[66]

Repairs of an unspecified nature were requested by the surgeon on July 23 and were authorized the

following day.[67] From this point forward, the two buildings were treated as one, and it is nearly impossible to tell which building is meant in any of the correspondence.

A month later, the post adjutant informed the doctor that his request regarding the privy could not be compiled with because the district commander had called for "a large detail of men for road duty." He assured the doctor that the job would be taken care of as soon as possible.[68]

The labor shortage still existed on September 24 when the quartermaster responded to a letter from the surgeon regarding the drainage of the hospital yards. When men were available, the work would be done.[69]

Sanitation was addressed again in orders issued on October 3. A barrel and a box for kitchen slops and refuse were to be kept where the prisoner detail could easily pick them up to cart the trash away.[70]

A sharply worded letter from the post adjutant to the surgeon took the physician to task for several observations he had made about sanitary conditions around the post. The adjutant himself found the grounds were reasonably clean except for a few areas. The rear of the hospital was dirty. In one of the outbuildings behind the adjutant's quarters, a pile of manure from the surgeon's horse was found. The possibility of moving the animal to the corrals was suggested, "as it seems rather unjust to allow the filth from a horse stall to be thrown in the rear of an Officers Quarters while that Officer is reported for not Keeping the rear of his Quarters in good sanitary condition and properly policed."

The hospital cattle yard was 10 yards from the kitchen and about 50 yards from the new ward. The hog pen was 45 yards from the kitchen and 75 yards from the ward. That information was a salvo fired at the surgeon for objecting to the proximity of a hog pen to a company kitchen and squadroom. All of the distances place the offending pens well outside the walls of the garrison, but the stench must have been overpowering when the wind was right. In conclusion, the adjutant's letter stated that the surgeon's recommendations were always carried out as far as possible and would be in the future "as far as understood" and with the limited means at hand.[71]

The quartermaster had asked for shingle roofs and tin waterspouts for all buildings the previous year, and these improvements were recommended again in the 1875 annual report. The post quartermaster was directed to submit estimates on September 22, 1875. When sent forward again, the post commander recommended that shingle roofs be approved for the hospital.[72]

There are no specific documents regarding the hospital or the rooms south of it for 1876. Hospital-related documents begin again in June of 1877.

Costs of a shingle roof for the hospital were estimated on June 19, 1877. Forty thousand shingles, 25 pieces of three-by-five lumber 30 feet long (1,040 feet total), 53 pieces of three-by-five lumber 23 feet long (1,664 feet), 3,600 feet of 1-inch sheeting, 100 pounds of No. 10 cut nails, 200 pounds of shingle nails, and 100 No. 10 spikes were called for. To extend the chimneys and ventilators, 1,000 adobes and 1,000 feet of one-foot lumber were required. A mason and an assistant for five days and a carpenter and a carpenter's assistant for twenty days were requested. The total cost of the project was estimated at $718.16.[73] Some of this may have been intended for the new wards. It was probably not approved because the post was seen as useless.

The annual inspection made on June 30, 1877, reported the old hospital in fair condition except for the outside plaster and the chimneys. Rooms in the old hospital were used for a dispensary and hospital stores, but no mention was made of the kitchen, steward's quarters, or surgery. The 1878 ground plan is of no help in locating any of the rooms.

Ten thousand feet of 1¼-inch flooring and 80 pieces of 22-foot-long ¾-inch lumber for joists to floor "one building used partly by the Hospital Department and as quarters for the Laundresses" was requested in the estimates for the next fiscal year. It seems unlikely that flooring was done at this time because Fort Craig was discontinued as an active post the following year.[74]

Medical and hospital property was inspected on April 1, 1878, and approved for disposal on April 24. What items these consisted of is unknown.[75] In May, the surgeon reported that no repairs or alterations were

required for the next fiscal year.[76] On July 29, the surgeon submitted an estimate for the number of boxes needed to pack up the hospital and medical stores. It was forwarded to the quartermaster the same day. The troops marched away on August 5, 1878.[77]

After the military hiatus, troops were camped at Fort Craig as early as May of 1880, but the buildings were not formally occupied until November 1. In a letter written the following May, the commanding officer did not mention the hospital when he detailed the extent of the general dilapidation he discovered when the post was reoccupied.[78] As before, estimates for the repair of the old hospital building were not listed separately from the two wards, which muddies matters considerably.

Wood was still being used for heating purposes. The surgeon complained in January 1881 that the wood being issued was not of sufficient quality to keep the patients warm. The quartermaster responded that he was trying his best to get good quality wood and hoped to resolve the matter soon.[79]

Some insight into necessary hospital repairs can be gleaned from an endorsement dated March 13 on an estimate submitted by the surgeon but missing from the records. The estimate was approved by the commander, who recommended that the lime and lumber be purchased as long as the cost of the lumber did not exceed $40.00 per thousand feet or the cost of the lime more than $1.00 a bushel.[80]

Funds to implement the estimate may have become available in mid-May. At that time, the quartermaster general authorized $146.00 for repairs on the recommendation of the surgeon general. On June 11, the chief quartermaster of the district transmitted blank receipts for $146.00 as well as a receipt from the First National Bank of Santa Fe for the same amount from the appropriation for hospitals.[81]

How the money was spent is not known, but that was not the end of the correspondence regarding the $146.00. On December 15, the surgeon (asking for a reply in writing) directed an inquiry to the adjutant asking how the money was spent. The letter was forwarded to the quartermaster "for report as to mutual agreement, mentioned within." Two days later, the quartermaster replied that no money or material except a small can of oil had been turned over to him by his predecessor, but he did understand that some work had been agreed to "when the necessary materials were on hand, &c." Unfortunately, no material was on hand, so the work would have to wait until funds had been received. The adjutant sent the information to the surgeon and asked what repairs were needed. In his reply, the surgeon listed the work promised by the previous quartermaster before he was relieved of his quartermaster duties in October, and stated that present quartermaster had agreed to do the same. That officer was ordered to do the work as soon "as is practicable," leaving the surgeon in the same straits that he was in when the correspondence began.[82]

Evidently, the surgeon was living in the hospital late in 1881. On December 22, he asked that the room next to the one he was occupying be assigned to him and that a door be cut between them. The quartermaster was directed to comply if a new door was practical.[83] The two rooms involved are not known.

Although taking indigent civilians into the hospital had not been unusual, a particularly sad case occurred early in 1882 when James H. Stewart, a former post commander, was admitted. A. H. Hilton of San Antonio, New Mexico, wrote to the commanding officer on January 22 that the former officer was seriously ill with pneumonia and had no money. Stewart was being cared for by a local doctor but was not comfortable with the care he was getting, so he asked Hilton to contact Fort Craig to see if he could be admitted to the hospital. The post commander telegraphed Hilton just after noon on the day he received the letter, telling him to put Stewart on the day train to San Marcial and notify him of the time Stewart would arrive so he could send transportation to meet him.

On June 12, the post subsistence officer requested an order covering the rations he issued during the month of February to "indigent citizen" Stewart. The verbal orders authorizing the ration issue were confirmed the following day, thus getting the commissary officer off the hook. In the meantime, the commissary general wrote the post regarding the issuing of rations to poor people. The commander replied generally, but noted Stewart's case specifically, saying that he would have died without the assistance of the medical and

subsistence departments of the post.[84]

Vaccinations again appear in the records in early 1882. The infantry company stationed at Fort Craig was ordered to the hospital at 3:30 in the afternoon of February 1, 1882, to receive them.[85]

A report made on February 12 by the inspector general of the Department of the Missouri found the facility "in excellent order."[86] This assessment may have been in the eye of the beholder, as will shortly be seen.

The annual estimate for repairs was submitted to district headquarters on February 20 but was returned to the post surgeon for a duplicate copy in accordance with the regulations. The estimate was returned by the district quartermaster, who noted that the quartermaster and not the surgeon was required to make the estimate. The post quartermaster demurred, believing that the 1881 Army Regulations required the medical officer in charge to make the estimates with the quartermaster's assistance. The commanding officer agreed with that interpretation and accepted responsibility for sending the paperwork to the wrong office in Santa Fe.[87]

On March 22, the post commander proposed roofing the officers quarters' with corrugated iron because it was "cheaper, *lighter* [and] *more* durable" than the often-discussed shingles. He was going to send an estimate for the hospital forward as soon as funds were available.[88] There is no indication in the records that the hospital ever received an iron roof.

When the quartermaster made his yearly inspection of government buildings on March 31, 1882, he did not specifically mention the hospital. However, he reported that all buildings were in poor condition because of decayed adobe walls. The mud roofs all leaked badly and were unsafe after heavy rains.[89]

Problems of another sort had surfaced the previous year when a civilian teamster from Fort Stanton was admitted to the hospital on December 2 with burns on his abdomen and one leg that he had received a few days earlier at Engle. Witnesses to the incident stated the man was drunk and fell into a campfire. The Fort Craig hospital drew rations for him until he was discharged on February 2, 1882. The post surgeon was not aware that the man had been dropped from the Stanton quartermaster's rolls on December 22 and had continued to provide medical care without charging for his services. He believed the Craig hospital was due $1.00 a day, so he requested that the Stanton quartermaster collect the total amount due for the period between December 22 and February 1. There was some disagreement about the circumstances of the incident as well—in other words, whether or not the injury had occurred in the line of duty. The quartermaster at Fort Stanton said the man was poor, out of work, and needed money that was owed to him. He hoped that if the Fort Craig physician could not "make him a present of the whole bill," he would reduce it as far as possible.

When the Stanton quartermaster received the endorsement insisting that the bill be paid, he wrote to the district quartermaster stating there was no restriction about illnesses contracted while the teamster was on duty, so he refused to pay it until authorized by higher authority. The chief quartermaster replied that the man was entitled to care while a government employee, but he wasn't sure about whether people not working for the government could receive rations. His opinion regarding the rations was that no charge ought to be made for them. The acting adjutant general of the district agreed, stating that as the hospital had received benefit from the rations, the charges should be dropped. On March 6, the Fort Craig surgeon withdrew the bill but had the last word when he suggested that post quartermasters be required to inform post surgeons when civilian employees were dropped from the rolls so rations would not be drawn for them. If civilians could pay, he said, they should so the hospitals would benefit.[90]

An endorsement made on April 10 requested that money not needed for the hospital at the Ojo Caliente outpost be transferred to the Fort Craig quartermaster, and that authorization be given to spend it on hospital repairs.[91] Late in May, $60.00 was transferred to the post quartermaster for repairs to the hospital. The surgeon was directed to submit a list of the work he wanted done and in what order. Whether or not this had anything to do with the Ojo Caliente funds is not known, nor is it known how much of the money was spent on the old structure.[92]

An endorsement made by the chief quartermaster of the division directing that money was to be spent

on the most necessary repairs was forwarded to the post quartermaster on June 12.[93] What funds were involved is not specified in the existing document.

The following day, the quartermaster forwarded a voucher to Santa Fe requesting payment to a local exchange for adobes for the hospital and for a barracks. The hospital's bill came to $60.00. The quartermaster was directed to write a check to pay the bill from the money transferred to him in May.[94]

The quartermaster informed Santa Fe on August 24, 1882, that he had sent the balance left on hand from an appropriation transferred to him on July 5 to the district quartermaster. It was the munificent sum of 25 cents.[95]

The physician serving at the post in September 1882 asked to be sent to another post. In approving the request, the post commander noted that the doctor had been in the field a great deal and that most of the men he had served with had been sent to another station that was "more healthy and agreeable." Since the surgeon from Ojo Caliente was scheduled to arrive within the week, the post would not be without a doctor for long. The surgeon from Ojo Caliente arrived on October 15, but the unhappy doctor was not released from Fort Craig until November 1.[96]

During at least one month—November—the surgeon was living in a tent. He did have a stove that was coveted by one of the lieutenants, who was informed, first, not to address correspondence directly to the commanding officer, and second, that he could have the doctor's stove when the doctor moved out of the tent.[97]

Late in November, the commander notified Santa Fe that little had been done in the way of hospital repairs because the construction necessary to house another troop of cavalry had taken precedence. However, at some point during the year, privies and a dead room at the north end of the east row of old hospital rooms were completed. The material used to build these additions is not known, but they may have been wood-frame. There is no evidence of them on the ground at the site. The number and location of the privies do not appear on the 1883 ground plan. Total cost for the additions (including the bathhouse behind the two wards) and general repairs totaled $1,006.18.[98]

The question of admitting a civilian to the hospital came up again on December 19 when the surgeon evidently asked if he could take in an ill man. The response from the adjutant was that unless it was a life-threatening case, the man could not be admitted.[99]

In a letter dated early in February 1883 that is now missing from the Fort Craig records, the surgeon asked for repairs that apparently had something to do with controlling the amount of dirt left behind by sandstorms. The adjutant acknowledged the problem and directed the quartermaster on February 4 to see what could be done. He replied on the following day that all of the repairs could be done at once and, in fact, were underway. The doctor must have asked for a wardrobe as well, because the quartermaster said there was no lumber at Fort Craig that could be used to make one.[100]

The commanders of the two cavalry troops and the infantry company were directed to send their recruits to the hospital on March 20 for the required vaccination. A record book filled out by the surgeon lists the names of the soldiers and the date of vaccinations. Recruits who arrived late in April were examined by the surgeon for the same purpose. Six infantry recruits who had traveled from Fort Union and arrived at San Marcial on the evening of July 22 were sent to the hospital for their examinations about five days later.[101]

On April 12, the quartermaster reported the hospital to be in poor condition. Walls were adobe, and the roof was still of mud. He considered the capacity to be sufficient for the number of personnel then stationed at the post. A shingle roof and general repairs were recommended for the next fiscal year. His plea for a shingle roof included the long-standing argument that the timbers supporting the roof were so old and rotten that it was dangerous to add more mud to repair them, and further, rains caused leakage and saturation problems. Shingles would also permit the successful repair of the adobe walls because the amount of mud removed in replacing the old roof would lessen the burden on the walls. He submitted an overall estimate of $21,793.53 for all the post repairs. Of that amount, $1,846.76 was earmarked for the hospital.[102]

The entire estimate caused consternation up the chain of command. The quartermaster and surgeon generals were mystified as to how the cost could be astronomical when the department inspector general had reported in February 1882 that the hospital was in "excellent order." The surgeon general disapproved the estimate. So did the quartermaster general, who based his decision on the fact that Fort Craig would not be occupied long enough to justify such an expenditure. The correspondence was received at Fort Craig on August 2, 1883.[103]

Smallpox was in the immediate area late in June. The Mexican gardener who worked for the post was nursing another employee suffering with the disease. The gardener was forbidden to enter any part of the fort for any reason. The disease also infected an enlisted man who was quarantined in the "vicinity of the post." Another soldier was assigned as his nurse on October 20, 1883; he was relieved from that duty on the first day of December.[104]

On January 21, 1884, the post quartermaster received three requests for work, one of which was for a closet in the hospital. He was directed to do the work in a certain order, the hospital closet falling in the middle. The specific room where the closet was to be built was not specified in the endorsement.[105]

A plan of the hospital complex made on March 22, 1884, shows the dining room in the old ward at the north end of the west building (Figure 13.3). The kitchen was in the original hallway, the other old ward was

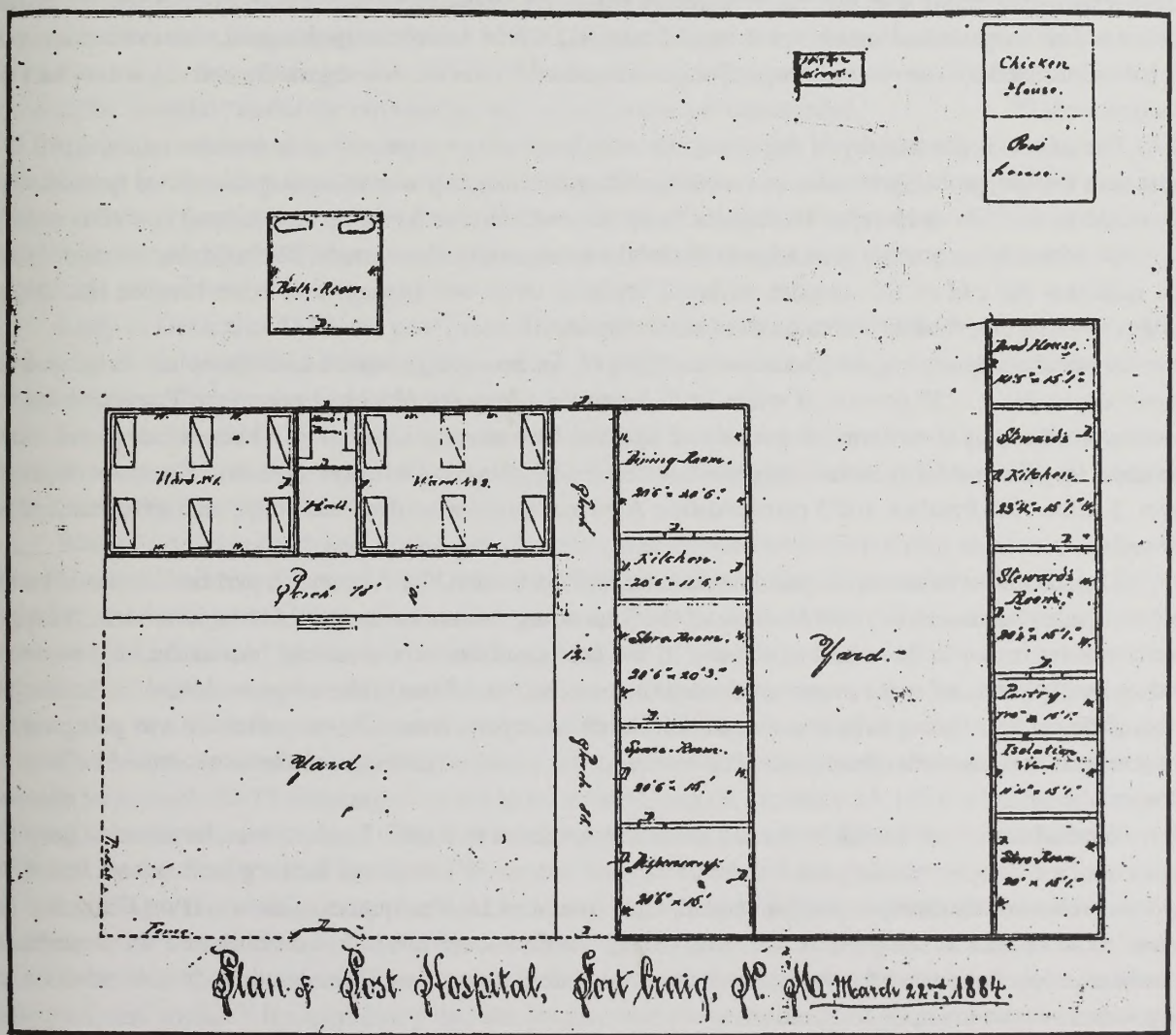


Figure 13.3. *1884 plan of the old hospital and hospital row (Gerow 1988:45).*

being used as a storeroom, and next to it were a spare room and the dispensary. The five rooms were fronted by a porch 12 feet wide by 88 feet long. Across the yard on the east site, from north to south, were the dead house, steward's kitchen, steward's room, pantry, an isolation ward, and a storeroom. There was no surgery in either row of rooms. A chicken house and a cow "house" was north of the dead room but separated from it by an open space. West of the chicken house, but not quite in line with the west building, was a water closet, perhaps one of the privies constructed in 1882.

The rooms in the west row measured 20 feet 6 inches east-west, and those in the east building measured 15 feet 1 inch. North-south measurements varied from room to room in both buildings.

There were ten windows in the west row. The five on the west face of the structure seem to match those shown in the 1860s photographs. The east row had eight windows; all but one looked east, toward the river.[106]

The post surgeon asked for repair funds on March 25. The commanding officer endorsed the doctor's letter with approval, saying that he agreed with the surgeon's viewpoint. The walls were in good condition; the hospital was roomy, well arranged, and well ventilated; and it could be made into "one of the very best in New Mexico." He advocated an immediate allotment so repairs could be completed before the summer rains began.[107]

The annual inspection found the hospital in fair condition. A shingle roof had been put on over the two wards, and that building was fronted by a picket fence. Those additions along with general repairs totaled $247.92. The surgeon had estimated it would take $1,397.58 to repair the hospital, most of which was probably intended for the old buildings. Those estimates were forwarded separately and are not in the Fort Craig records.[108]

The post was not healthy in the spring. One of the cavalry troops was in quarantine late in April in a camp near the fort, probably because of a measles outbreak. Charges preferred against an enlisted man detailed as a nurse in the "Camp Hospital" refer to a "hospital tent." Where the camp was located is not known.[109]

On May 11, the post surgeon requested that the services of an extra nurse be ended, but whether or not this indicates the end of the measles outbreak remains unknown. It may have been because the soldier assigned to this duty was from the quarantined company.[110]

A telegram dated August 23 authorized $100.00 for immediate repairs to the hospital. Paint was the largest expenditure: 250 pounds of white lead, 5 pounds of dry lampblack, 4 pounds of Prussian blue, 10 pounds of chrome yellow, and 10 pounds of Spanish brown were on the list. Other paint-related items included 10 gallons of turpentine, 20 gallons of boiled oil, 1 gallon of coral varnish, 15 pounds of patent dryer, 3 whitewash brushes, and 3 paint brushes. Also purchased were three sash tools and 100 pounds of 8d cut nails.

The remainder of the appropriation was sent to Fort Selden. On August 27, permission was asked to ship the purchases to another fort because of the impending closure of the post. On September 1, the chief quartermaster in Santa Fe endorsed a reply to the post quartermaster directing him to ship the stores to district headquarters after the surgeon selected the ones he would need. The surgeon replied on September 5 that if the post was going to be abandoned in October, no repairs were necessary. But if it was going to stay open several more months, the stores were necessary for sanitary reasons, and the work should be done as soon as possible.[111]

When the post commander returned the correspondence to district headquarters, he asked to keep the stores until a decision regarding the closure of the post was made. He echoed the surgeon's remark that if the post was retained, the stores would be needed. On September 15, headquarters informed Fort Craig that the stores could remain at the post for the time being, but they were not to be used because the department commander had not yet made up his mind about the date the post would be abandoned.[112] Whether or not they were ever used is open to question.

Typhoid and typho-malarial fever became problems at Fort Craig in late September, and the surgeon

was directed to put the hospital "in a proper state of cleanliness." On September 24, the doctor requested that an enlisted man be assigned to duty as a night nurse because of the outbreak of typhoid fever.[113]

The final annual inspection made on March 31, 1885, reported one building of adobe that measured 165 by 165 feet, an assessment that is hard to reconcile since there were three buildings. According to the quartermaster there were eight rooms in use, when actually there were 14, not counting the animal pens and privy. The hospital was reported as being in good condition. No repairs had been made in the previous year and none were requested for the following year.[114]

A few words about furnishings are in order, although not much more than that exists in the documents. On January 2, 1861, the post surgeon asked that a "night chair" be completed for a man who was very sick. According to the doctor, the carpenter assigned to the job several days earlier had been given other tasks "deemed more important" by the quartermaster.[115] Though not so stated, the chair may have been for the use of someone with dysentery.

Some bunks were moved from one of the company barracks to the hospital on February 19, 1863. The reason for the move was not given, but the post return shows a jump from 23 sick in January to 44 sick in February. How many of those were actually in the hospital is unknown.[116]

In mid-August 1865, the post commander directed the quartermaster to honor the surgeon's request for a "complete" cook stove unless one of the garrison companies wanted it. But he first sent the doctor's request to the district inspector general, then at Fort Craig, asking him to endorse his opinion of the transaction "under existing orders relating to the Stoves." The inspector general said he saw no objection to issuing the stove to the hospital "under the circumstances," which were left unrecorded.[117]

Cooking was done over fireplaces until post quartermasters began buying locally available stoves for both heating and cooking, evidently with the blessing of their superiors. This resulted in a duke's mixture of stoves. Although there are no records of such purchases in the existing Fort Craig papers, the post quartermaster had access to some. In 1875, the quartermaster general decided to put a stop to the purchase of a variety of stoves and adopted a standard design.[118]

Early in December 1880, the post quartermaster received notice that 12 parlor heaters, 10 Nos. 1 and 2 cooking stoves, and 15 No. 2 (the larger) cooking ranges were on the way. Accompanying the stoves were 60 joints of No. 7 stove pipe, and 175 joints of No. 6 pipe.[119]

On December 9, 1874, the post surgeon stated that he needed two pine tables. The quartermaster was directed to comply with the request if he could. The brief on the surgeon's letter did not indicate what size tables were required.[120]

When Fort Tularosa closed, the hospital property was shipped to the Fort Craig surgeon accompanied by an invoice dated November 18, 1874. The list is long, but instructive: 48 boxes of medical and hospital supplies, one "refrigerator," 14 bedside tables, an earth closet, six hand litters, 26 brooms, six mop handles, three crutches, 16 chairs, 12 mattresses, a cauldron and stove, 16 iron cots, a keg, and four "wire mattresses." Six days later, six more boxes of medical and hospital property, two cooking stoves, two washtubs, a rocking chair, seven chairs, two mattresses, an office desk, and a bundle of books were transferred to the Fort Craig hospital.[121]

Quartermaster's lamps were first issued by the army in 1882. The post quartermaster was directed to provide an estimate for 12 chimneys for each lamp at Fort Craig on February 13, 1882. Mineral oil lamps for lighting were mentioned in April. The quartermaster had been out of oil for 30 days, but had received a shipment by the third week of the month.[122]

Lighting was probably pretty much catch as catch can. Army-wide, enlisted men made do with candles, or whatever they could devise. Some office lamps at Fort Craig used "volatile oil." Such lamps were banned in 1869 because they were dangerous, so the post quartermaster was required to sell the lamps, shades, reflectors, and wicks.[123] It seems likely that the hospital had the best possible lighting available, but it is not mentioned in the records.

On Christmas Eve 1883, company and troop commanders and all other officers were directed to report on the quality of the mineral oil in use at Fort Craig for the information of the quartermaster general. The required reports were returned to the quartermaster on December 29 by the adjutant, who said that the commanding officer thought the oil was of a poor grade, dark, and it smoked. It did not provide much light, either.[124]

HOSPITAL ROW[125]

The first reference in the records to the rooms south of the hospital facility was made by Bvt. Second Lt. Joseph Wheeler of the Regiment of Mounted Riflemen, who joined the post on October 25, 1860. He requested that the building on the northeast corner of the parade ground, then in use by two "camp women" whose husbands were absent, be assigned to his company as quarters. Wheeler believed his men would be comfortable, and the quartermaster could find other rooms for the women. In the brief of the letter the building was referred to as a "house," which may have been the clerk's descriptive term.[126]

The 1854 ground plan shows five rooms south of those used by the hospital. The first two were marked as offices apparently assigned to the quartermaster; the next three rooms were used by the commissary. The last two of the latter rooms were used for storing subsistence supplies. All but the fourth room had doors leading to the parade ground. It is likely, however, that a door into the parade ground also existed in that room because there appears to be a drafting error on the plan. Back doors led onto the main yard in the first, third, and fifth rooms. One internal door near the west (front) wall is indicated. No porch is drawn on the plan for this part of hospital row.

South of these rooms was a picket-post building of some size that was used for quartermaster stores. Two doors led into the main yard or corral. The building was probably a Civil War addition built to accommodate the influx of stores during those years. A gate south of that building separated it from sutler's row.

A cellar is shown on the 1865 plan between the last adobe room and the picket-post building. A photograph taken of the magazine in 1865 shows a piece of canvas sheeting over the opening,[127] as does the picture taken in the fall of 1867.

From north to south, two rooms were identified as quartermaster offices (one of which was mistaken for the hospital by a hapless musician who later complained about the abusive language used by the quartermaster when he mistakenly entered the office),[128] the subsistence office, an issue room, and the butcher shop, which had an iron bar door in 1867. On the 1865 plan, five doors were shown leading into the parade ground. The number of back doors matched the earlier plan. There was one interior door near the east wall in the quartermaster's office, and one near the west wall between the subsistence office and the issue room. Fireplaces must not have existed because there were no chimneys in the 1865 or 1867 photographs.

No porch was in front of the building on the 1865 plan, although one was drawn in front of the hospital, which leads to a question that will be addressed shortly. Both photographs showed the line of trees that were drawn on that plan.

The picket-post building was still used for storing quartermaster supplies, and there were still two doors leading into the main yard. The structure was plastered, but the picket-post barracks were not. A picture of the east side of the building taken in 1865[129] shows no plaster. The deterioration of the "rough casting" between 1865 and 1867 graphically illustrates the on-going battle post quartermasters fought to keep the structures in what might be called military order.

The chief commissary officer of the district paid a visit to Fort Craig in mid-January 1868. He found the subsistence office "neat and clean" and the paperwork correctly kept except for a book in which no returns had been entered since October. There was no civilian employed in the department at the time. A price list was properly posted in the sales (issue) room next to the office but some distance from the storehouses. The butcher shop was next door to the sales room, so the location of the office had not changed from the

1865 plan. All in all, it was a favorable report.[130]

To meet the pressing need for officers' quarters, construction on a third set began in the spring of 1868 but had not progressed very far when a new post commander put a stop to the project in early May. He proposed instead that the existing sets be enlarged, but after a trip to district headquarters, he withdrew his support from that idea. On June 26 he wrote that on his return it had come to his "notice" that in the line of buildings on the east side of the parade ground there were "10 good rooms all in good repair made originally as officers quarters, and assignable as such now. These quarters formerly all had good portals, but Col Carson cut them down for fuel. . . ." Those rooms were being used for shops, offices, and storerooms that he believed could be moved into other buildings on the post. The vacated rooms would require "one or two new Kitchens" and "a new portal."[131]

The ten rooms referred to were probably the five in hospital row and the five in sutler's row then in use by the quartermaster, as shown on the 1865 map. The 1854 plan showed but eight rooms.

In mid-July, the post commander wrote that two new sets of officers' quarters had been authorized, but no means for repairing the old ones had been authorized. Where the second set was to have been built is not known, but it might have been the addition to the commanding officer's quarters, referred to as incomplete in one letter. Delivered under the contract for the necessary materials were 40,000 adobes that may have ended up in an addition behind the rooms in hospital row.

A special estimate for lumber was forwarded by the post quartermaster and approved by the commanding officer on July 20. Plans were to use 5,000 feet to replace worn-out "earthen" (jaspe) floors in the hospital, and another 2,000 feet was earmarked to replace the portals cut down during the Civil War. The district quartermaster authorized the purchase of lumber for building repairs on July 28.[132]

No specific information exists on the construction of the rooms behind hospital row. The 1869 plan appears to show a shortened west row of rooms. A room was added to the east side of the old medical storeroom before the 1873 plan was drawn.

On September 16, the quartermaster complained that he only had one mason, a plasterer, and three enlisted men laying adobes, and he needed six more men besides the two already assigned to help with hauling adobes and mixing "mortar." Since mortar was found in the 1994 excavations to have been used as a binding material, it is very likely that this correspondence is related to the construction of these rooms. The quartermaster also requested that the two men in the guardhouse who were originally assigned to him be released. In a postscript, he noted the names of six men who had been sent that morning and asked that they be returned to him for duty that afternoon.[133] Early in October, the quartermaster wanted the four extra-duty men assigned as painters replaced with four others because the first four were in the guardhouse.[134]

The 1869 ground plan, made during the summer, shows the addition of what was probably five rooms, but they evidently shared three backyards. A small, free-standing structure was drawn between hospital row and sutler's row. No other plan shows that building. It may very well have been part of the new construction, as will be seen, or it may represent the still-standing picket-post building. The cellar that was the original magazine is also missing from the map and may have been filled in by this date.

On February 22, 1869, the post quartermaster submitted an estimate for the lime necessary to repair the buildings at Fort Craig. Sixty fanegas were called for to repair the hospital and "Subalterns Qtrs" (the rooms south of the hospital). The district quartermaster said that if the plastering was merited, it would add to the "appearance and durability" of the structure, but he thought the money could better be spent at other posts where the interiors were deteriorating. On March 10, the estimate was disapproved.[135]

By 1873, the south part of the building was occupied by laundresses. The poorly drawn ground plan indicates that eight rooms immediately south of the hospital were occupied by washerwomen and their (enlisted men) husbands. The next two rooms were used by the quartermaster (perhaps to keep the peace) followed by four more rooms allotted to the laundresses. The last room in use by the ladies was a single

room that was about three-fourths as long (west-east) as the two rooms it abutted. Next to it was a new structure for quartermaster stores.

Sixteen rooms were in the row. Four new rooms for quarters had been added to the south end of the original row, in addition to four new rooms behind those just south of the hospital. Thirteen of the rooms were assigned to the laundresses. An undivided yard extending from the hospital to the last pair of rooms was enclosed by a fence and was probably used by the women for their tubs.

The annual inspection made on June 30 found the building in "very poor repair being old, worn with the weather and leaky."[136] The estimate for repairs for the fiscal year ending June 30, 1874, included 30 bushels of lime (interior plastering?) and 40 more bushels for roof and floor repair for the 14 [*sic*] rooms allotted to the laundresses. The total projected cost came to $92.50. The two 15 by 20 foot rooms used by the quartermaster required 15 bushels of lime for plastering and 5 bushels of jaspe to repair the roof. The total cost for those rooms was $20.00.[137]

No documentation regarding repairs in 1876 is in the post records. However, an increase in the strength of the garrison in October forced the removal of the laundresses into the back rooms of both barracks. According to a ground plan published in 1876, the last pair of rooms in hospital row were occupied by an officer. The rooms between him and the hospital were assigned to Company G, Fifteenth Infantry. In his monthly sanitary report, the surgeon noted that the holes behind the quarters needed to be filled in with dirt, not rubbish. He lamented the lack of ventilation resulting from the fact that the rooms were not meant to be enlisted men's quarters. Two small rooms were especially stuffy because there were six beds in each room. The surgeon pointed out that the rooms must be aired out regularly or the men would become ill from the "bad air."[138] By April of the following year, the laundresses were probably back in the building because garrison strength diminished.

On July 21, 1877, the post quartermaster reported the structure was in fair condition except for the chimneys and "rough casting." The rooms were used for quarters for the noncommissioned staff, the post library, and the telegraph office. The chimneys needed to be replastered with mortar. If the post was going to remain open, estimates to repair the entire building included 10,000 feet of 1¼-inch flooring, and 80 three-by-fours measuring 22 feet long (1,760 feet) for joists. Here, the quartermaster identified the rooms as quarters for the laundresses (wives of noncommissioned officers).[139] Since the post was marked for abandonment, it seems unlikely that funds for repair were appropriated.

The 1878 plan shows the rooms occupied by laundresses. In 1876, the back yard had been fenced into thirds, and so it remained.

No other information exists about hospital row until after reoccupation of the fort in 1880. The rooms were not mentioned by the post commander in any of his 1880–1881 correspondence detailing the deterioration of Fort Craig in the two years since all but a small detachment of troops had left. Nevertheless, it must be assumed that doors and windows were damaged or missing; roofs sagging, collapsed, and leaking; and that the walls and plaster were in poor condition. Only the most critical repairs were made in the beginning, and further work moved slowly thereafter.

The ground plan submitted in 1882 showed 14 rooms listed as offices and quarters in hospital row. The six rooms next to the hospital shared one yard with a small square shown at the southeast corner of the yard. Four rooms shared the next two yards. In the last yard, another small square was drawn in the northeast corner. If these were structures, they may have been privies. The fifteenth room and the quartermaster's building at the south end were no longer present.

The post quartermaster made his annual inspection on March 31, 1882. He noted that six rooms were used for noncommissioned staff quarters, which would have included the laundresses. Additionally, the subsistence and quartermaster offices, subsistence sales room, library, and telegraph office were housed in the building. All had been floored in the past fiscal year, probably with wood. He also reported that all of the post

buildings were in poor condition owing to age, rain, and lack of repair, and that all roofs leaked as well.[140]

Correspondence between an officer wanting quarters and the post adjutant from March 23–27, 1883, provides a glimpse of the living situation at Fort Craig. A first lieutenant asked to be assigned quarters according to his rank, which would have entitled him to two rooms. He was informed he could have any two adjacent rooms. If he wanted two rooms already occupied by an officer who was not his junior but was using more than his quarters allowance, the senior officer would be permitted to choose which rooms he would vacate. However, the rooms had to be adjacent, one in front and one in back.[141]

Quarters for officers were limited at the time, and the families of three lieutenants were forced to live in the rooms of hospital row, which, the post adjutant explained, had been "Offices, issue rooms and Laundry rooms, and in the absence of any place to put these families, they were permitted to take a number of Store [*sic*] rooms which were vacated and renovated for the purpose, at great trouble and inconvenience by the officers themselves. . . ." The adjutant declined to reduce the number of rooms available to those officers and their families but agreed to give the requesting officer other rooms partitioned off from the clothing storeroom, probably in sutler's row.[142]

Correspondence that began on March 25 documents a difficult problem requiring a diplomatic solution. The request seemed to be simple: place a door in quarters assigned to a second lieutenant as soon as possible. The quartermaster evidently removed a door and said he would furnish a new one unless the officer wished to use a curtain instead. This was agreed upon, and the lieutenant asked that an iron rod to hang the curtain be fashioned by the blacksmith. This was also agreed to and done. Then, the lieutenant decided he wanted the door after all. The quartermaster told him he would get to it as soon as he could because all the carpenters were tied up on the new blacksmith shop. The lieutenant was dissatisfied and complained. The adjutant backed up the quartermaster, and the officer had to wait for the door.[143] An endorsement made on June 24, 1883, specifically stated that the two rooms next to the hospital had been assigned to one of the lieutenants and his family.[144]

The annual inspection made on March 31, 1883, found the structure in poor repair. It was described as being adobe with a mud roof. Officers were still quartered in the building. Repairs in the previous year had amounted to $65.44. The quartermaster wished for a shingle roof, a porch, and general repairs amounting to $2,570.88.[145]

The ground plan that accompanied the inspection report shows 14 rooms. The middle fence in the yard had been removed, but the small square was still in place. The other fence dividing the yards was still present, and the small square remained in the northeast corner. Finally, the quartermaster received instructions on May 29 to extend the hospital porch to include the entire front of the quarters as soon as possible.[146]

When the annual inspection was made on March 31, 1884, the building was described as being in fair condition with no repairs needed. During the previous fiscal year, the front had been plastered. A porch was built, probably with a shingle roof although the wording is not clear. The cost came to $531.96. The building was still occupied by officers.[147]

The 1884 ground plan shows the extended porch. The yard associated with the last four rooms was drawn with a solid line. A dotted line is shown for the rest of the yard; dotted lines on the plan can represent walls, porches, fences, or the stables. It may be that the solid lines represented a more permanent arrangement than the dotted ones.

In the 1880s, the small building that was on the south end of hospital row had disappeared from the plans. The structure for quartermaster stores that was on plans prior to 1878 may have been used in the 1880s for fuel storage. Today, a large amount of coal is scattered in the approximate location of the building.

The final inspection was made on March 31, 1885. The measurements of the complex were given as 120 by 140 feet. This presents a problem because the rooms were 20 feet 6 inches wide in the west row, and 15 feet 1 inch wide in the east row. Even by adding the new hospital and the portal, the figures do not agree.

Adding in the yard between the east and west buildings confuses the matter even more. The north-south measurement of the west structure was 88 feet, and the east row was 14½ feet longer. Sixteen rooms were listed in 1885; the 1884 plan showed 14. The building was described as a one-story adobe in good condition. No repairs had been made in the previous year, and none were requested for the following year.[148]

TELEGRAPH OFFICE

Fort Craig played an active role in the construction of the military telegraph line during the winter of 1875–1876. Among the services provided were items of clothing, wood bracket fabrication, fuel, forage, and occasionally, temporary quarters for the men involved in the project. In 1876, the superintendent of construction was at the post in January, March, and April.

Undoubtedly, telegraph service was available before the date of the first telegram in the records. One of the first received at Fort Craig was sent on April 9, 1876, from Santa Fe via the signal service asking for the number of gun carriages and the amount of powder at the post. However, it was not received until April 12. Another telegram (sent through a signal sergeant at Belen) dated April 14 from Santa Fe made it clear that delays between that point and Fort Craig were unaccepatable and ordered a detachment to "complete" the roughly 60-mile line between Sabinal and the post.[149] This may have involved repairs rather than completion.

Another telegram arrived at Fort Craig on April 12 from Fort Selden, with the news that the Indians had broken out of Camp Bowie, Arizona, and were on their way to Tularosa (Ojo Caliente), New Mexico. The telegram indicated that "the 6th Cavalry were on their trail, notify Fort McRae," and "what do you propose to do [?]" An immediate answer was requested; Fort Craig wired that the post would do what it could with the limited force available.[150]

Men were sent out to repair the line on a regular basis during the next two years. These forays were as much for prevention as for breaks in the line.

The annual inspection made in 1877 located the telegraph office in hospital row, but it did not specify the rooms.[151] The last telegrams in the existing records of the initial occupation were sent on July 29, 1878. All were related to the abandonment of the post.[152]

In 1880, telegrams were sent from Fort Craig as early as late May when the department commander wired the news that Victorio's camp near the head of the Palomas River had been struck successfully.[153] What type of telegraphic service was available at the time is not known.

In early November, instructions were received authorizing the issue of fuel to telegraph offices not to exceed the amount issued individually to the offices of the quartermaster, subsistence officer, and the adjutant.[154]

On November 20, the post telegraph operator asked to be issued an "operating table." Where the telegrapher set up his table during this period remains unknown. Several telegrams were sent and received in December, as well as throughout 1881.[155]

During the summer of 1881, Fort Craig was again busy with telegraph construction, this time with a line to Fort Stanton. The line ran from Fort Craig to Lava Station on the railroad, a point about 12 miles south of the post. From there, it turned east through what is known today as Mockingbird Gap at the north end of the San Andres Mountains to Mound Spring, a well-known watering hole in the Tularosa Basin. Fort Craig was responsible for keeping that part of the line in repair; details from Fort Stanton kept their line to Mound Spring in working order.[156]

Even though a telegraph had been in operation for more than a year, instructions were received at Fort Craig on October 24, 1881, to provide a list of material and instruments needed to establish a telegraph office at the post.[157] Two days later, the post commander sent the following list to district headquarters: one

each relay, sounder, and key of the Western Union style; one plug switch; a barrel of blue stone; a 60-cup Gravity (with zinc) or Eagle battery; two pounds of No. 16 office wire; six double connectors; one pair of cutting pliers; two papers of double pointed tacks; one wrecking instrument; and one set of pulleys and blocks.[158]

A sergeant was learning how to operate the telegraph, and it was suggested that he be paid 35 cents extra-duty pay per day if placed in charge of the office. A little over a week later, the commanding officer responded to a letter trying to raid the post of a telegrapher by stating there was no operator at the post, only the sergeant in training.[159]

Telegraphic communication seems to have been limping along at Fort Craig. The acting signal officer complained on November 28 that the line between San Marcial and the post was in poor working order because the battery in use was small. He asked for "at least 25 jars with zincs &c.," and a complete set of instruments. Other requests included being informed when the battery at Fort Stanton was ready and whether or not extra-duty pay would be allowed for the operator. The second of December, district headquarters replied that fifty jars with zincs would be shipped as soon as the "necessary coppers" were received from the chief signal officer. Fort Stanton had been directed to notify Fort Craig as soon as their battery was operational.[160]

Sometime early in December, an operator other than the sergeant in training was assigned to duty as a telegraph operator. Part of his job included testing the line between Fort Craig and Crocker, a station on the railroad about 20 miles from the fort, because old wire from the first military line in New Mexico had been used and it was "very brittle."[161]

The post signal officer got himself in hot water on February 18, 1882, when he shut down the line to move the instrument into his quarters. The lapse in service was observed in Santa Fe, and the officer was asked to account for his action. His office, he wrote, was in his quarters, and he ran the line in so he could communicate if necessary with other line operators without going to the telegraph office. According to him, the line had only been left open (unable to receive or transmit) for 20 minutes after 1:00 (though he did not say whether it was after noon or after midnight). The commanding officer backed him up, saying it seemed reasonable to have the instrument in the signal officer's office, and as far as he had been able to determine, the interruption had lasted less than thirty minutes.

Since the signal officer and the lieutenant with the door problems that befuddled the quartermaster were one and the same, it is safe to conclude that the telegraph office at this date was in hospital row. The office was still in those rooms when the annual inspection made on March 31, 1882, reported that they had been floored.[162]

The line between Fort Craig and Fort Stanton required constant repair during 1882. As in the previous year, repair parties from Craig were sent as far as Mound Spring. In mid-December, the commanding officer reported that the line needed a complete overhaul. The post signal officer had reported a need for 600 new poles a month earlier. None were to be had at Fort Craig; the nearest place to get them was 40 miles away in the mountains. The commander suggested buying cedar poles in northern New Mexico and shipping them to San Marcial by rail. Sufficient quantities of other material, including insulators and wire brackets, were available at the post.[163]

A Board of Survey was convened late in January 1883 to look into the loss of telegraphic instruments. There are no documents describing the circumstances, the instruments lost, or the outcome, however.[164]

In April, the signal officer at Fort Stanton forwarded a complaint about the service at Fort Craig directly to district headquarters. Miffed at the lack of military courtesy, the Craig commander angrily wrote Santa Fe that the telegrapher was on guard duty at the time in question, and the operator had not only complained about it to Fort Stanton, he refused to send a wire for the Craig adjutant. The operator would be placed under arrest and tried as soon as he returned from Fort Stanton, where he was a witness before a

court-martial. Service was never interrupted at Fort Craig, and since the quartermaster was a competent operator, he would assume the duties full-time. The incensed commander closed by saying, "Attention is called to the impertinent and presumptious [*sic*] threat of the Sergeant to close the office here etc. and to his language. It is perhaps needless to remark, that the officer and the operators here will be held subordinate to the Post Commander."[165] Nevertheless, the commanding officer wrote to the Department of the Missouri on May 31, 1883, asking that a telegraph operator be ordered to Fort Craig. He explained that an officer had volunteered for temporary duty as a telegrapher, but there was no qualified enlisted man at the post who could assume the duty, even on a temporary basis.[166]

On June 24, the two rooms next to the hospital were assigned to the telegraph office. One room was to be used for quarters and the other as the office.[167] The rooms had last been occupied by an officer, and on the early plans of the post the west room was marked as the hospital storeroom.

When the post quartermaster made his annual report on March 31, 1884, the telegraph office had moved to a room in sutler's row and was in need of a shingle roof and flooring.[168] There is no reason to think that it was moved back to hospital row before the post closed the following summer.

A letter written on December 20, 1884, announced that the military telegraph office at Fort Craig was closed. Nevertheless, at least one more wire was sent on January 24, 1885.[169]

CONCLUSION

After Fort Craig was closed, some of the quarters were used by civilians until about 1896. Whether or not the post-military population was large enough to press hospital row into use for housing is not known.

The 1994 field season provided a remarkable look at construction methods as well as at modifications to the existing structure. Far more was learned from the dig than can be gleaned from the collected Fort Craig documents. The thought persists, however, that more information about the building can be found in the records of the superior chain of command.

No study of the military telegraph in New Mexico has been done. A thorough one exists for Texas. With research in primary documents, a similar one for New Mexico could and should be done. Such a study would clarify many of the puzzling questions about the military telegraph at Fort Craig. ✠

NOTES

1. For a short discussion of the establishment of Fort Craig, see Chapter 9, this volume.

2. March–September 1857, April–August 1860, Returns from U.S. Military Post, 1800–1916, Records of the Adjutant General's Office, Record Group [RG] 94, National Archives and Records Service, Washington, D.C. [NARS]. Hereafter, PR with month and year. Built close to a marsh, Fort Buchanan, New Mexico [Arizona], was located near present-day Patagonia (Frazer 1965:6; also see Figure 2.1, this volume). Letter [Ltr] July 9, 1860, Post Commander, Headquarters Fort Craig, New Mexico [Post CO], to Assistant Adjutant General [AAG], Department of New Mexico, Santa Fe, New Mexico [DNM], Letters Sent and Endorsement Books, Fort Craig, New Mexico, March 31, 1854–August 16, 1864, Army Continental Commands, RG 94, NARS. Hereafter, Roll 1, LSEB. PR August 1860. All documents originated at Fort Craig unless otherwise noted.

3. Ground plans consulted in writing this chapter include: 1854, 1865, 1866, 1878, 1884, Office of the Chief Engineer, RG 77, NARS; 1869, 1882, Cemeterial File, Report and Maps of Fort Craig, N.M., Adjutant General's Office, RG 94, NARS; 1876 [relabeled 1869], Headquarters Military Division of the Missouri 1876:151; 1883, Quartermaster General Consolidated Correspondence File containing Letters Received by the Post Quartermaster (1882) and Letters Sent by the Fort Marcy Post Quartermaster (1865–1867), Office of the Quartermaster General, RG 92, NARS. Hereafter, QM Roll.

4. See Chapter 11, note 41.

5. Photograph [Photo] No. SC 87957, n.d., U.S. Army Signal Corps, NARS. Hereafter, USASC. Although the series of photographs taken of Fort Craig in 1865 is attributed by NARS to the Signal Corps, they were probably taken by J. G. Gaige (sometimes Gage, sometimes George A.) under a contract he signed with the district quartermaster in Santa Fe to photograph all forts in the district as reported in the "Santa Fe Weekly Gazette" on August 26, 1865 (Rudisill 1973:28). Rudisill suggested the contract was signed in August 1865, but the Fort Craig quartermaster was directed to provide transportation late in July to Los Pinos, New Mexico, for "Mr. Gage The Artist," indicating that the photographer already had official status (Ltr July 23,

1865, Post Adjutant [Post Adj] to Post Quartermaster [Post QM], Letters Sent and Endorsement Books, Fort Craig, New Mexico, August 17, 1864–December 29, 1870, Army Continental Commands, RG 94, NARS. Hereafter, Roll 2, LSEB). The second photograph of the hospital was taken in early October, 1867, by William A. Bell (1965:245–247); the photograph is number 14945 in the collection of the Arizona Historical Society in Tucson.

6. Ltr March 4, 1861, Post Surgeon, Hospital, Fort Craig, New Mexico [Post Surg] to Post Adj, and Endorsement [End] March 4, 1861, by Post CO, Frames 428–430, Roll 1, Letters Received, Fort Craig, New Mexico, 1854–1885, 7 rolls, Army Continental Commands, RG 393, NARS. Hereafter, LR with frame and roll numbers. The same letter requested that the post carpenter make a pair of crutches.

7. "Return to casualties in the United States troops, commanded by Col. Edward R. S. Canby, at the battle of Valverde, N. Mex., February 21, 1862" (Horn and Wallace 1961:138). The 17 who died are noted in Alberts 1993:49, footnote 12).

Ickis (in Mumey 1958:82) noted one amputation in his company; the procedure was common during the era.

Basil Norris was appointed assistant surgeon (of volunteers from Maryland) on October 11, 1852, and rose to the rank of colonel on November 18, 1882; he retired on March 9, 1892, and died on November 10, 1895 (Heitman1965[1]:751). A picture of Surgeon Norris with General James H. Carleton, Kit Carson, and other officers was taken in Santa Fe in 1865 (Thompson 1976:30).

Joseph Howland Bell was appointed assistant surgeon (of volunteers from Pennsylvania) on April 13, 1860, and major on July 28, 1866; he died on July 21, 1885 (Heitman 1965[1]:218).

8. Mumey 1958:81. It is tempting to speculate where the dead room was—possibly in the storeroom.

9. "Consolidated Report of Sick and Wounded, February 1862," LR, Frames 932–933, Roll 1.

10. "Mem — Endorsement on Application of Asst. Surgeon Foos to have Hospt. sinks cleaned out &c," December 23, 1862, Post CO to Post Surg, Roll 1, LSEB.

11. Ltr March 15, 1863, Post CO to DNM, Roll 1, LSEB. The new magazine was finished "for all practicable purposes" on April 28, 1863 (Ltr April 28, 1863, Post CO to DNM, Roll 1, LESB).

12. End June 15, 1863, Post CO to Post QM on Ltr of Post Surg, and End June 16, 1863, Post CO to Post QM on Ltr of Post Surg, Roll 1, LSEB.

13. End June 20, 1863, Post CO to Post QM on Ltr of Post Surg, ibid. Circular [Cir] June 26, 1863, General Orders, Special Orders and Circulars, April 1854–June 1885, Fort Craig, New Mexico, Army Continental Commands, 1821–1920, RG 393, NARS. Hereafter, Orders with number and date.

14. End June 29, 1863, Post CO to Post Surg, Roll 1, LSEB.

15. End July 3, 1863, Post CO to Post QM on Ltr of Post Surg, ibid.

16. For a short discussion of the plan, see Chapter 12, this volume.

17. "United States Government Post Hospital, at Fort Craig N.M. November 1863. Rules and Regulations," November 18, 1863, Rudolf Tauszky, Asst. Surgeon, U.S.A., Papers relating to the Post Hospital, 1857–1870 (9W2, 13/6/B, Box 11), part 5, Army Continental Commands, RG 393, NARS. Tauszky was Hungarian, which accounts for the novel spelling and grammar found in the document; he was appointed assistant surgeon (of volunteers from New York) on September 24, 1863, honorably discharged on July 27, 1865, and died on September 21, 1889 (Heitman 1965[1]:945). His tenure at Fort Craig began on October 26, 1863, and ended when he transferred to Fort McRae, sometime in December 1863. He was at Fort Craig again beginning on July 11, 1864, until he was placed in arrest in August (?) for some unspecified dereliction of duty, finally departing the post before September 10, 1864 (PR, October 1863–September 10, 1864).

Fort McRae was about 30 miles south of Fort Craig. It was established on April 3, 1863, and named for captain Alexander McRae, Third U.S. Cavalry, killed at the battle at Valverde on February 21, 1862; the post was abandoned on October 30, 1876 (Frazer 1965:100).

18. Special Order [SO] 218, June 23, 1864, Orders.

19. SO 229, June 28, 1864, ibid. "Plan of Post Hospital, Fort Craig, NM, March 22nd, 1884," QM Roll. Hereafter, 1884 Hospital Plan, QM Roll.

20. See Chapter 12, this volume.

21. SO 285, paragraph [para] 2, July 27, 1864, Orders.

22. SO 301, August 19, 1864, ibid.

23. General Order [GO] 15, para I, April 15, 1865, ibid. Paragraph II directed that manure from the quartermaster corrals be taken to the ravines leading to the river or to the post garden, remarking that "The careless number of people depositing manure and other filth from the corrals around in view of the Post, gives the appearance of uncleanliness, and will be discontinued."

24. Ltr 60, April 24, 1865, Post CO to Chief Quartermaster [CQM] District of New Mexico, Santa Fe, New Mexico [DiNM], Roll 2, LSEB.

25. Ltr 74, April 30, 1865, Post CO to Post QM, ibid.

26. Ltr July 18, 1865, Post CO to Post QM, Post Commissary Officer, and Post Surg, ibid. The letter is an extract of a missing endorsement from department headquarters at Fort Leavenworth, Kansas.

27. Ltr November 17, 1865, Post CO to Post CO Fort McRae, New Mexico, ibid.

28. Ltr April 1, 1866, Post CO to Assistant Inspector General, U.S. Army, Santa Fe, New Mexico, enclosing Ltr March

31, 1866, Post Surg to Post CO, copy courtesy Peggy A. Gerow. The surgeon's letter is not in the Fort Craig documents but is filed with the letter from the post commander as A-96-1866 in Letters Received, District of New Mexico, Santa Fe, located in the Zimmerman Library, University of New Mexico, Albuquerque. End April 11, 1866, Post CO to Adjutant General's Office, Washington, D.C. [AGO], Roll 2, LSEB. Pvt. James L. Rutherford, Company B, First Veteran Infantry, California Volunteers, was the soldier who died.

29. PR, December 1865–December 1866. The stonecutter was Sgt. William H. Ales, Company B, First Veteran Infantry, California Volunteers; his post-military career at Fort Craig is discussed in Chapter 12, note 11. What Ales was cutting stone for is a mystery. The adobe bacon house was finished 8 days before Ales arrived (Ltr April 20, 1866, Post CO to DiNM announced the completion of the middle storehouse in the southwest bastion, Roll 2, LSEB). The carpenters and masons were each paid $65.00 a month. The one to twenty laborers on the project were each paid $30.00 per month.

30. Ltr June 27, 1867, Post Surg to Post Adj, and Ends (same date) Post Adj to Post QM and Post Adj, LR, Frames 756–757, Roll 2.

31. Companies A and B, 125th U.S. Colored Troops arrived at Fort Craig on October 12, 1866; they left the post on October 22, 1867, being replaced by Company C, 38th Infantry, another black company (PR, October 1866–October 1867; Ltr August 24, 1867, Post Surg to Post Adj, LR, Frames 1120–1121, Roll 2).

32. End 185, November 20, 1867, CQM DiNM to Post Co, received at Fort Craig on November 27, 1867, Roll 2, LSEB. The estimates are missing from the documents.

33. End 189, December 11, 1867, Post CO to ? DiNM on Ltr December 10, 1867, Post QM to CQM DiNM, Roll 2, LSEB. At this time, according to the endorsement, the addition to the post commander's quarters was under construction; the endorsement was largely related to those requirements.

34. Cir, March 9, 1868, Orders.

35. Ltr 76, May 7, 1868, Colonel and Brevet Major General W. B. Hazen, Post CO, to Acting Adjutant General [AAG], District of New Mexico, Santa Fe; Ltr 90, June 26, 1868, Post CO to Acting Assistant Adjutant General [AAAG], District of New Mexico, Santa Fe, Roll 2, LSEB. Hereafter, Hazen Letters, Roll 2, LSEB.

36. End 207, June 23, 1868, Post CO on Ltr June 23, 1868, of Post Surg, ibid.

37. Lt. Col. Christopher "Kit" Carson, New Mexico Volunteers, commanded Fort Craig from April 1, 1862, to April 18 or 20, 1862 (PR, April 1862 and April 10–20, 1862).

38. End [350?], September 14, 1868, Chief Medical Officer [CMO], District of New Mexico, Santa Fe, on Post Surg's Ltr September 6, 1868, to CMO DiNM, and End September 15, 1868, AAG DiNM to Post CO; End 361, September 23, 1868, Post CO to AAAG DiNM, Roll 2, LSEB. The two wards are discussed in Chapter 12, this volume.

39. McKay 1918:25, 26, 28–29. McKay served at Fort Craig from April 20, 1869, to September ?, 1869 (PR, April–October 1869). The post commander was Lt. Col. and Bvt. Maj. Gen. Cuvier Grover, Thirty-eighth Infantry.

40. End 697, July 16, 1869, CQM DiNM to AAAG DiNM, and End July 16, 1869, AAAG DiNM to CQM DiNM; End July 17, 1869, CQM DiNM to Post Adj, and End n.d., Post Adj to Post QM, Roll 2, LSEB.

41. "Report on condition of public buildings at Fort Craig Letter of July 20, 1869," QM Roll.

42. End 823, October 18, 1869, Post QM to Post CO, and End, Post CO to Post QM, on Ltr October 18, 1869, Post Surg to Post QM, Roll 2, LSEB. Officers were then living in hospital row.

43. End 1060, April 30, 1870, Acting CQM DiNM to AAAG DiNM; End May 3, 1870, AAG DiNM to Post Adj; and End May 8, 1870, Post Adj to Post QM, Roll 2, LSEB.

44. Billings 1870:246. Charles Sutherland arrived at Fort Craig on December 27, 1854, and departed on September 13, 1855 (PR, December 1854–September 1855). Patient capacity was 16 at this time. Acting Assistant Surgeon W. R. Brewer was at Fort Craig from November 17, 1869, until the end of the year. Acting Assistant Surgeon H. G. Tidemann arrived at Fort Craig on March 28, 1870; transferred to Fort Stanton on April 7, 1870; relieved Brewer in July at Fort Craig; and was relieved from duty on August 31, 1870, pending a transfer (Post Returns, Fort Craig, N.M., 1854–1885, Post Returns from U.S. Military Posts, 1800–1916, Adjutant General's Office [AGO], RG 94, NARS. Hereafter, Post Returns Craig). J. F. Boughter, listed as a citizen physician, was at Fort Craig from December 2, 1873, to December 29, 1875 (Post Returns Craig, December 1873–December 1875).

45. Ltr August 3, 1871, Post CO to AAAG DiNM, and Ends 1/1512, August 8, 1871, Acting CQM DiNM; B844, August 10, 1871, Acting CQM DiNM and AAAG DiNM; and I/1543, August 11, 1871, AAAG DiNM to Post CO, LR, Frames 967–969, Roll 3. Also, Ltr 141, Letters Sent, Endorsements, Telegrams, Fort Craig, NM, Army Continental Commands, RG 393, NARS [hereafter, LS I, EB II, or EB III], where the date of the letter is August 4, which is probably correct (LS I, Frame 68).

46. GO 14, April 14, 1872, Orders.

47. End 320[a], July 31, 1872, QMG, Washington, D.C., to Chief Quartermaster [CQM], Military Division of the Missouri, Chicago [MilDivMo], and End September 2, 1872, Post CO to Post QM, EB III, Frame 232. The post received $1000.00 for other repairs (End 311[a], August 25, 1872, Post Adj to Post QM on Ltr July 31, 1872, QMG Washington, D.C., to CQM MilDivMo, ibid., Frame 230).

48. Ltr July 11, 1873, Post QM to QMG Washington, D.C., QM Roll. Hereafter, AR 1873, QM Roll.

49. "Estimate of Building Material, labor &c., for repair of Post Hospital at Fort Craig N.M. in the Fiscal Year ending

June 30, 1874" and 8th End, August 22, 1873, Medical Director DMo to AAG DMo with undated "Ground Plan of Post Hospital, Fort Craig, N.M."; the content of the endorsement makes the date of the plan clear (QM Roll). Lime was 75 cents a bushel, jaspe $1.75 a bushel, adobes $10.00 a thousand, and lumber 4 cents a foot; the total came to $349.50. Each mason was paid $2.20 a day; each extra-duty carpenter, 35 cents a day; and each extra-duty laborer received 20 cents per day.

50. AR 1873, 7th End, August 20, 1873, AAG DMo to Medical Director, DMo; 9th End, August 27, 1873, CO DMo to AGO; 10th End, September 1, 1873, CQM Mi1DivMo to AAG Mi1DivMo; 13th End, September 22, 1873, QMG Washington, D.C., to AGO, QM Roll. The 1873 plan of the hospital is not with the endorsements.

51. Ltr September 27, 1873, AAAG DiNM to Post CO; Ltr October 2, 1873, Post CO to AAAG DiNm; End 6628, October 6, 1873, AAG DiNM to Post Co, LR, Frames 640–643, Roll 4. Ltr 155, October 6?, 1873, Post CO to AAAG, LS 1, Frame 78. Apparently, the commanding officer sent a duplicate set which crossed the endorsement in the mail. The October 2 letter (No. 150) is also on this roll (LS 1, Frame 177).

52. Ltr July 24, 1874, CQM DiNM to CQM DMo; 10th End, August 25, 1874, CO DiNM to ?; End September 14, 1874, CQM DMo to AAAG Mi1DivMo; 17th End, October 5, 1874, QMG Washington, D.C., to Secretary of War through AGO; 19th End, October 22, 1874, Chief Clerk, War Department to AGO, QM Roll.

53. End 380, December 9, 1873, Post Adj to Post QM on Ltr December 7, 1873, Post Surg to Post Adj, EB II, Frame 368.

54. Ltr January 14, 1874, Post Surg to Post Adj, LR, Frames 126–127, Roll 5. The surgeon recommended the guardhouse and barracks be done as well for the same reason.

55. Billings 1875:251. Surgeon Boughter's tenure at Fort Craig is addressed above in note 44.

56. End 169, July 28, 1874, Post CO to ? DiNM on Ltr July 27, 1874, Post Surg to ? DiNM, EB II, Frame 434.

57. End 250, November 2, 1874, Post Adj to Post QM on Ltr October 31, 1874, Post Surg to Post Adj; End 251, November 3, 1874, Post QM to Post Adj; and 2d End, November 6, 1874, Post CO to ? DiNM, EB II, Frame 368; End 263, 5th End CQM DiNM to AAAG DiNM received at Fort Craig on November 25, 1874, ibid., Frame 746.

58. Ltr November 18, 1874, AAG DMo to Post CO, LR, Frames 94–95, Roll 5.

59. End 276, December 14, 1874, Post Adj to Post QM on Ltr December 9, 1874, CQM DiNM to Post Adj, EB II, Frame 481.

60. End 305, December 26, 1874, Post CO to CO DiNM on Ltr December 22, 1874, Post Surg to Post Adj, EB II, Frames 491–492; End 26, January 13, 1875, Post Adj to Post Surg on 3d End, January 6, 1875, CQM DiNM to AAAG DiNM, ibid., Frames 503–504. Fort Tularosa was first established on April 30, 1872, about 15 miles north of Reserve, New Mexico; it was moved to Horse Creek about 18 miles east of that location and was abandoned on November 26, 1874 (Frazer 1965:105). Fort Tularosa quartermaster records are mixed in with the Fort Craig endorsements.

61. End 115, March 17, 1875, Post Adj to Post Surg on Ltr March 15, 1875, Post Surg to Post Adj, EB II, Frame 532.

62. End 129, March 24, 1875, Post CO to ? DiNM on Ltr March 23, 1875, Post QM to Post CO, EB II, Frame 537; End 156 on 3d End, April 1, 1875, CQM DiNM to AAAG DiNM, and End April 7, 1875, Post CO to Post QM, ibid., Frames 547–548.

63. End 174, April 22, 1875, Post CO on Ltr April 20, 1875, Post QM to Post Adj, EB II, Frame 553; End 218, 3d End, April 30, 1875, Acting CQM DiNM to CQM DMo; 9th End, May 18, 1875, AAG Mi1DivMo to CO DMo; 13th End, May 29, 1875, CQM DiNM to Post QM, received at Fort Craig on June 4, 1875, ibid., Frames 566–567; End 217, May 26, 1875, Acting CQM DiNM to Post Adj, received at Fort Craig on June 1, 1875, ibid., Frame 566.

64. End 231, June 9, 1875, Post CO on Ltr June 7, 1875, Post Surg to Post Adj transmitting the estimates for repairs in the fiscal year 1876–1877, EB II, Frame 572.

65. "Case of Annual report . . . on condition of public buildings at Fort Craig NM . . . Extract," July 4, 1875. QM Roll. Hereafter, AF 1875, QM Roll.

66. AR 1873, QM Roll.

67. End 260, July 24, 1875, [Post Adj] to Post QM on Ltr July 23, 1875, Post Surg to [Post Adj], EB II, Frame 580.

68. Ltr 145, August 20, 1875, Acting Post Adj to Post Surg in response to Post Surg to [Post Adj] August 18, 1875, LS 1, Frame 253. The surgeon's letter is missing from the records.

69. End 281, September 24, 1875, Post Adj to Post Surg on Ltr Post Surg to Post Adj September 23, 1875, EB II, Frame 586.

70. GO 27, October 3, 1875, Orders.

71. Ltr 168, October 3, 1875, Post Adj to Post Surg, LS 1, Frames 245–246. The officers' quarters in question may have been in the east set; the rooms along the north side of the placita in those quarters had been used for a variety of purposes over the years.

72. AR 1873, QM Roll. End 295, 5th End, September 22, 1875, CQM DMo to CQM DiNM, EB II, Frame 593; End 310, October 22, 1875, Post CO on Ltr October 18, 1875, Post QM to Post CO, ibid., Frame 600.

73. "Estimate for a Shingle Roof on Post Hospital," June 19, 1877, LR, Frame 456, Roll 5. Shingles cost $5.00 per thousand and sheeting $35.00 per thousand feet; 1,040 feet of lumber came to $41.60, and 1,664 feet cost $66.56. The No. 10 nails were $16.00, shingle nails were $36.00, and the No. 10 spikes cost $20.00. Adobes were figured at $12.00, and 1,000 feet of lumber came to $35.00. The mason and his assistant came to $25.00, and the carpenter and his helper was figured at $140.00.

74. "Case of condition of public buildings at Fort Craig N.M. Extract from Insp. Report, July 21, 1877," QM Roll. Hereafter, AR 1877, QM Roll. The total amount of lumber required for joists came to 1,760 feet; no cost per foot was given, but 3,000 feet of the same size lumber for the guardhouse was figured at $30.00. The 2d End made on August 20, 1877, CO

DMo to AAG Mi1DivMo, noted that Fort Craig had lost its importance since the removal of the Indians (QM Roll).

75. End 183, "Inventory and Inspection Reports of Medical and Hospital Property . . . Inspected at Fort Craig NM. April 1st 1878," and End April 24, 1878, by AAG DMo, EB III, Frame 57.

76. End 186, May 4 [*sic*], 1878, Post CO to ? DiNM on Ltr May 6, 1878, Post Surg to ?, ibid., Frame 58.

77. End 290, July 29, 1878, Post Adj to Post QM on Ltr July 29, 1878, Post Surg to Post Adj, ibid., Frame 93; PR, August 1878. An officer with a very small detachment of the Fifteenth Infantry stayed until after April 30, 1879 (PR, April 1879).

78. End 345, May 26, 1881, Post CO on Ltr n.d. Post QM to ?, EB III, Frame 281. For a discussion of the deterioration, see Chapter 9, this volume.

79. End 28, January 14, 1881, Post Adj on Ltr [January 10, 1881] Post Surg to Post Adj, EB III, Frame 156.

80. End 196, March 13, 1881, Post CO on Post Surg n.d. "Transmits Estimates for material and Labor for repairs on Post Hospital at this Post," EB III, Frame 233.

81. End 327, May 18, 1881, 6th End, Post Adj to Post QM on Ltr n.d. QMG Washington, D.C., to CQM Di1DivMo, EB III, Frame 275; End 381, June 11, 1881, Post Adj to Post QM on Ltr n.d. CQM DiNM to Post Adj, ibid., Frame 293.

82. End 906, December 20, 1881, Post Adj to Post QM on Ltr December 18, 1881, Post Surg to Post Adj, EB III, Frame 431; End 909, December 21, 1881, Post Adj to Post Surg on Ltr December 20, 1881, Post QM to Post Adj, ibid., Frame 432; End 937, December 30, 1881, Post Adj to Post QM on Ltr December 23, 1881, Post Surg to Post Adj, ibid., Frame 439. The surgeon's letter is briefed in the last endorsement so the work description is not available (PR, September–December 1881). It is interesting to note that the titles of adjutant and quartermaster were held by the same officer, as was often the case; he was also the subsistence officer.

83. End 916, December 22, 1881, Post Adj to Post QM on Ltr December 22, 1881, Post Surg to Post Adj, EB III, Frame 434.

84. Ltr 133, January 22, 1882, "A. H. Hilton, Dealer in General Merchandise and Mining Supplies. Agent for California Riveted Clothing, San Antonio, NM" to Post CO, LR, Frames 30–31, Roll 6; Telegram [T] 64, 12:10 P.M., January 22, 1882, Post CO to A. H. Hilton, San Antonio, New Mexico, LS I, Frame 612; Ltr June 12, 1882, Post Acting Assistant Commissary Officer to Post Adj, LR, Frames 506–507, Roll 6; Order [O] No. 114, June 13, 1882, Orders; Ltr 340, July 3, 1882, Post CO to Commissary General, Washington, D.C., LS I, Frames 676–677. August H. Hilton was the father of Conrad Hilton, the hotel magnate (Christiansen 1967:18–19).

James H. Stewart, Fifteenth Infantry, served as post commander at Fort Craig from October 12, 1871, to August 14, 1872, and from October 2, 1872, to January 4, 1874, except for brief absences on official business (PR October 1871–January 1874). He was dismissed from the army on April 27, 1877, for killing a black soldier by running the man through the chest with a saber while on duty at Fort Stanton in December 1876. The court-martial was held at Fort Craig in February 1877, and because of the extenuating circumstances of the incident, Stewart nearly won a year's suspension instead of dismissal (Court-Martial Case File, QQ 132 [1877] Captain James H. Stewart, Records of the Judge Advocate General, RG 153, NARS). After his illness at Fort Craig, he seems to have disappeared from the records.

85. End 146, February 1, 1882, Post Adj to CO, Company F, Twenty-third Infantry, EB III, Frame 463.

86. Ltr 235, July 12, 1883, QMG Washington, D.C., to CQM Mi1DivMo, and End 3458/83, July 31, 1883, CQM DiNM to Post QM, LR, Frames 636–637, Roll 6. Hereafter, Ltr July 12, 1883, LR.

87. End 262, February 20, 1882, Post Adj to Post Surg, EB III, Frame 479; End 290, February 25, 1882, Post Adj to Post QM, ibid., Frame 483; End 294, February 25, 1882, 2d End, Post QM to CQM DiNM, and 3d End, February 26, 1882, Post CO to CQM DiNM, ibid., Frame 485. The paragraph of the Army Regulations being referenced was number 2358; Circular 53, section 3, series 1881 Department of the Missouri was also cited.

88. Ltr 212, March 22, 1882, Post CO to AAG DiNM, LS I, Frame 645–646.

89. "Case of the Annual Report on condition of public buildings at Fort Craig N.M." in Ltr March 31, 1882, Post QM to QMG Washington, D.C., QM Roll. Hereafter, AR 1882, QM Roll.

90. End 299, 1st End, February 10, 1882, Post QM Fort Stanton to Post Surg Fort Craig, and 2d End, February 15, 1882, Post Surg Fort Craig to Post QM Fort Stanton, EB III, Frame 473; End 344, 5th End, February 22, 1882, Post QM Fort Stanton to CQM DiNM, 8th End February 28, 1882, CQM DiNM to AAAG DiNM, and 9th End, March 1, 1882, AAAG DiNM to Post CO Fort Craig, ibid., Frame 493; End 357, 11th End, March 6, 1882, Post Surg Fort Craig to ? DiNM, forwarded March 7, 1882, ibid., Frame 496. The injured man's name was Luciano Pais.

91. End 604, April 10, 1882, Post CO to CQM DiNM, EB III, Frame 535. The outpost at Ojo Caliente was in the process of being discontinued; it was about 35 miles southeast of Fort Craig. Frazer (1965:101–102) gives the original date of establishment as 1859, which is the date for a military site at a different Ojo Caliente in northwestern New Mexico.

92. Ltr 296, May 27, 1882, Post Adj to Post Surg, LS I, Frame 664.

93. End 857, June 12, 1882, Post Adj to Post QM, EB III, Frame 562.

94. Ltr June 13, 1882, Post QM to CQM DiNM, and 1st End, June 15, 1882, CQM DiNM to Post QM, QM Roll. The bill for the adobes used in the barracks totaled $281.33. The merchant was A. E. Rouiller of Paraje (about 8 miles south of Fort Craig), whose activities are discussed at length in Boyd 1986.

95. End 1220, August 24, 1882, Post QM to CQM DiNM, EB III, Frame 610.

96. End 1188[b], October 2, 1882, Post CO to DiNM?, ibid., Frame 630, PR, October–November 1882.

97. End 1226[b], November 19, 1882, Post Adj to Second Lt. Alexander T. Dean, Fourth Cavalry, ibid., Frame 654. The

lieutenant's letter is missing.

98. Ltr 520, November 25, 1992, Post CO to AAG DiNM, LS I, Frame 728; "Submits annual Inspection Report of public buildings and transmits Estimates and Plans for Repairs of Barracks and Quarters and New buildings" in Ltr April 12, 1883, Post QM to QMG Washington, D.C., QM Roll. Hereafter, AR 1883, QM Roll.

99. End 1637, December 19, 1882, Post Adj to Post Surg, EB III, Frame 678. The adjutant cited paragraph 2311 of the 1881 Army Regulations.

100. End 205, February 4, 1883, Post Adj to Post QM on Ltr n.d. Post Surg to Post Adj, EB lll, Frame 721; End 211, February 5, 1883, Post QM to Post Adj, ibid., Frame 722.

101. Ltr 95, March 19, 1883, Post Adj to CO Company F, Twenty-third Infantry, CO Troop E, Fourth Cavalry, and CO Troop M, Fourth Cavalry, and Ltr 96, March 19, 1883, Post Adj to Post Surg, LS l, Frame 769; O 76, para ll, April 25, 1883, Orders; Ltr 231, July 27, 1883, Post Adj to CO Company F, Twenty-third Infantry, and Ltr 232, July 27, 1883, Post Adj to Post Surg, LS I, Frames 799–800. The documents note that the requirement was in compliance with GO 1, January 1, 1883, Headquarters of the Army Adjutant General, which related to the vaccination of recruits ("Official Communications received During Month" column, PR, January 1883). Now a National Monument, Fort Union was established July 26, 1851, and abandoned on February 21, 1891 (Frazer 1965:105–106). It is about 28 miles northeast of Las Vegas, New Mexico.

102. AR 1883, QM Roll; Ltr July 12, 1883, LR.

103. Ltr July 12, 1883, LR.

104. Ltr 198, June 26, 1883, Post Adj to Post QM, LS I, Frame 792; O 168, October 20, 1883, and O 190, December 1, 1883, Orders.

105. End 57, January 21, 1884, Post Adj to Post QM on "L. R. #26," which is missing, EB lll, Frame 852.

106. 1884 Hospital Plan, QM Roll.

107. End 266, March 25, 1884, Post CO to DMo? on "L.R. 112," which is missing, EB lll, Frame 884.

108. Ltr April 12, 1884, Post QM to QMG Washington, D.C. in ". . . Annual Inspection of public buildings, made March 31, 1884," QM Roll. Hereafter, AR 1884, QM Roll.

109. End 325/84, April 12, 1884, Post Adj to Judge Advocate of Garrison Court-Martial on "Charges and Specifications preferred against Sergt G. M. Liggett Troop 'M' 4th Cavalry," LR, Frames 425–426, Roll 7; End 326, April 12, 1884, Post Adj to Judge Advocate of Garrison Court-Martial on "Charges and Specifications preferred against Pvt Robert Murphy Troop 'M' 4th Cavly," ibid., Frames 417–418. Liggett's violation occurred on April 5 and Murphy's during April 5–6.

110. Ltr May 11, 1884, Post Surg to Post Adj, LR, Frame 560, Roll 7.

111. Ltr August 27, 1884, Post QM to CQM DiNM; End 4468/84, August 30, 1884, CQM DiNM to AAAG DiNM; 6th End, September 4, 1884, Post Adj to Post Surg; and 7th End, September 5, 1884, Post Surg to Post Adj, ibid., Frames 68–71.

112. Ltr 250, September 5, 1884, Post CO to AAAG DiNM and End September 15, 1884, AAAG DiNM to Post Co, ibid., Frames 88–89. This letter (no. 250) is also in LS I, Frames 891–892.

113. O 137, September 19, 1884, Orders; Ltr September 24, 1884, Post Surg to Post Adj, LR, Frame 91, Roll 7.

114. "Annual Inspection report, Public Buildings Fort Craig, NM on 31 day of March 1885, with estimates for additional alterations and repairs for the fiscal year commencing July 1st 188-.," QM Roll. Hereafter, AR 1885, QM Roll.

115. Ltr January 2, 1861, Post Surg to Post Adj, LR, Frames 253–254, Roll 1.

116. GO 5, February 21, 1863, Garrison Court-Martial of Pvt. James Collins, Company B, Fifth Infantry, California Volunteers, Orders. Collins had been ordered to help move the bunks and refused; his harsh sentence was confinement at hard labor for 20 days wearing a 12-pound ball attached to his left leg by a chain 3 feet long and the forfeiture of $10.00 of his pay for a month. There were 23 sick men in January, 44 in February, 38 in March, and 21 in April (PR, January–April 1863).

117. Ltr August 17, 1865, Post CO to Post QM on End August 16, 1865, from the Inspector General's Department, DNM, at Fort Craig on Ltr n.d. of Post Surg, Roll 2, LSEB.

118. Clary 1984:287, 481–497.

119. End December 7, 1880, Acting Post Adj to Post QM on Ltr n.d. CQM DiNM to Post QM, EB lll, Frame 119.

120. End 380, December 9, 1873, Post Adj to Post QM on Ltr December 7, 1873, Post Surg to Post Adj, EB ll, Frame 368.

121. "Invoice of Medical and Hospital Property marked 'Post Surgeon Fort Craig N.M.' . . .," November 18, 1874, Post Surg Fort Tularosa [*sic*], New Mexico, LR, Frame 950, Roll 4; "Invoice of Medical and Hosp. Property . . .," November 24, 1874, Fort Tularosa [*sic*], New Mexico, ibid., Frame 949.

122. Clary 1984:283; End 208, February 13, 1882, Post Adj to Post QM, EB III, Frame 470; End 615, April 13, 1882, Post Adj to Post CO, Ojo Caliente, ibid., Frame 536. The quartermaster noted that he could ship no less than the 5 gallon can the oil came in when the shipment finally arrived, and that the officers at Fort Craig had been buying their oil from the post trader (Ltr 271, April 23, 1882, Post Adj to Post Surg, Ojo Caliente, LS l, Frame 658).

123. Clary 1984:282; End 944, January 4, 1870, Post Adj to Post QM on Ltr November 29, 1868, QMG Washington, D.C., to CQM MilDivMo, Roll 2, LSEB.

124. End 1161, 2d End, December 24, 1883, Post QM to Post Adj, and 3d End, December 29, 1883, Post Adj to Post QM, EB III, Frames 841–842.

125. "Hospital row" is used by the writer to distinguish the building from "sutler's row" (also the writer's term), a similar structure south of the hospital; the two buildings were separated by a gate leading to the corral area. The terms were

never used in any of the Fort Craig records.

126. Ltr November 24 1860, Lt. Joseph Wheeler, CO, "Co. A Regt Mdt Riflemen" to Post Adj, LR, Frames 308–309, Roll 1. Wheeler and Company A were at Fort Craig from October 25, 1860, to February 6, 1861 (PR, October 1860–February 1861). Wheeler's remarkable career began in 1859 when he was commissioned in the First Dragoons upon graduation from West Point. He resigned on April 22, 1861, to join the Confederacy and achieved the rank of lieutenant general, served as a general in the U.S. Volunteers in 1899, and was made brigadier general in the regular U.S. Army on July 16, 1900, retiring on September 10 of the same year. He was the only officer to wear the Blue, the Gray, and the Blue; he earned the sobriquet "Fightin' Joe" during the Civil War (Heitman 1965[1]:615).

127. Photo No. 87959, Powder Magazine, USASC.

128. Ltr June 20, 1865, Post CO to Post QM, Roll 2, LSEB.

129. Photo No. 87958, Quartermaster/Mechanics Corrals [north], USASC.

130. Ltr January 15, 1868, Commissary of Subsistence Officer, DiNM to AAAG DiNM, LR, Frames 246–250, Roll 3. The commissary stores were kept in the three storehouses in the southwest bastion at this time (ibid.).

131. Hazen Letters, Roll 2, LSEB. "Col Carson" was Christopher "Kit" Carson.

132. Ltr 107, July 18, 1868, Post CO to AAG DiNM, enclosing "Special Estimate for lumber to repair public buildings Fort Craig, NM"; End 267, July 28, 1868, CQM DiNM to AAAG DiNM; and End 2230, July 31, 1868, AAAG DiNM to Post Co, LR, Frames 20–24, Roll 3. The original contract had called for 120,000 adobes and 46,000 feet of lumber, but it was annulled. This information, except for the special estimate, is also in Roll 2, LSEB.

133. Ltr 101, September 5, 1868, Post QM to Post Adj, LR, Frames 104–105, Roll 3. The use of the word "mortar" seems to make this letter assignable to the addition.

134. Ltr October 4, 1868, Post QM to Post Adj, LR, Frames 90–91, Roll 3.

135. "Estimate for Lime at Fort Craig N.M." in Ltr February 22, 1869, Post CO to CQM DMo, ibid., Frames 558–561. Also found in Roll 2, LSEB. The price per fanega had been $1.44; the post quartermaster thought it could be gotten for near that if put out for bids. End 1289, March 8, 1868, CQM DiNM to AAAG? DiNM, and End 554, March 10, 1868, AAAG DiNM to Post Adj, LR, Frames 585–587, Roll 3. The endorsements are also found in Roll 2, LSEB.

136. AR 1873, QM Roll.

137. Ibid. Lime was 75 cents a bushel, and jaspe $1.75 for the same amount.

138. Ltr November 30, 1876, Post Surg to Post Adj, LR, Frames 248–250, Roll 5; PR, September 1876–May 1877.

139. AR 1877, QM Roll. No prices were given for the lumber.

140. AR 1882, QM Roll.

141. End 406, March 23, 1883, Post Adj to First Lt. David V. McDonald, Fourth Cavalry, EB III, Frame 750.

142. End 415, March 26, 1883, Post Adj to Post QM, on a missing letter, EB III, Frame 751; End 422, 2d End, March 26, 1883, Post QM to Post Adj; and 3d End, March 27, 1883, Post Adj to First Lt. D. V. McDonald, Fourth Cavalry, ibid., Frame 752.

143. End 410, March 25, 1883, Post Adj to Post QM, EB III, Frame 750; End 421, March 26, 1883, Post QM to Post Adj, and 3d End, March 27, 1883, Post Adj to Lieutenant S. A. Dyer, ibid., Frames 751–752. Eva Crawford Reckhart, Captain Jack Crawford's daughter, recalled that she had "verbal encounters with the bully of the post, a Lieutenant Dyer, whose table manners . . . were downright boorish" (Trumbo 1947:17, 49–52. The quote is on p. 51).

144. End 652, 8th End, June 24, 1883, Post Adj to Post QM, EB III, Frame 780. Hereafter, End 652, 1883, EB III.

145. AR 1883, QM Roll.

146. End 589, 3d End, May 29, 1883, Post Adj to Lieutenant S. A. Dyer, Twenty-third Infantry, EB III, Frame 773.

147. AR 1884, QM Roll.

148. AR 1885, QM Roll.

149. End 179 on T April 9, 1876, AAAG DiNM to Post CO, received at Fort Craig on April 12, 1876, EB II, Frame 705; End 191 on T April 14, 1876, AAAG DiNM to Post CO, ibid., Frame 709. Belen is about 77 miles north of Fort Craig, and Sabinal is 11 miles south of Belen.

150. End 178 on T April 12, 1876, Post CO to Post CO Fort Selden, LS 1, Frame 273. Fort Selden is about 146 miles south of Fort Craig and is now a New Mexico State Monument. Camp (Fort) Bowie is near the present town of Bowie, Arizona. Fort Bayard is about 10 miles east of Silver City, New Mexico, and about 85 miles from Fort Craig as the crow files. The outbreak is discussed in Thrapp 1980:169–180. The reference to Tularosa meaning Ojo Caliente is on p. 174.

151. AR 1877, QM Roll.

152. T 272, July 29, 1878, Post CO to AAAG DiNM, LS 1, Frame 374.

153. Thrapp 1980:279–280. The Palomas River heads in the Black Range and flows into Caballo Lake about 7 miles south of Truth or Consequences, New Mexico.

154. End December 6, 1880, AAAG DiNM to Post QM, enclosing copy of Ltr December 3, 1878, CQM DMo to CQM DiNM, LR, Frames 852–854, Roll 5.

155. End November 20, 1880, "U.S. Mil. Telegraph Line," Santa Fe, to Post CO on Ltr n.d. Pvt. W. A. Merchant, "S.C.U.S.A.," Fort Craig to U.S. Mil. Telegraph Line, Santa Fe, EB III, Frame 113.

156. LS 1, Ends, LR, May–November 1881, passim. Mound Spring is about 10 miles southeast of Mockingbird Gap at the north end of the San Andres Mountains.

157. End 718, October 25, 1881, Post Adj to Lt. S. Allen Dyer, Twenty-third Infantry, on Ltr. n.d. AAAG DiNM to Post Adj, EB III, Frame 388.

158. Ltr October 26, 1881, Post CO to AAAG DiNM, LS 1, Frame 587. A plug switch (also, peg switch or peg board) was a simple switching matrix that allowed office instruments to be cut in and out of circuits for testing or closing. The wrecking instrument was a box relay consisting of a key and a relay mounted on one board. A box covered the relay coils and acted as a resonator for the relay armature actions. This allowed the instrument to be used at railway wreck sites and for pole construction; they could also be used while testing circuits on the plug switch. The writer is indebted to collector-conservator Roger W. Reinke of Alexandria, Virginia, for the foregoing information, which was provided on April 19, 1995.

159. End 739, November 4, 1881, Post CO to AAAG DiNM, EB III, Frame 392.

160. End 814, November 28, 1881, Post CO to AAAG DiNM on Ltr November 28, 1881, Post Signal Officer [PostSigO] to Post CO, ibid., Frame 409; End 840, December 2, 1881, Post Adj to PSigO on Ltr December 1, 1881, AAAG DiNM to Post Adj, ibid., Frame 414.

161. Ltr [incomplete] 141, October 22, 1881, Lt. W. L. Buck, Thirteenth Infantry, commanding "Detachment Const U.S. Mil. Tel. line Camp near Engle St. N.M." to AAAG DMo, LR, Frames 23–26, Roll 6. Engle Station was about 35 miles south of Fort Craig; the name is still on the maps just east of Elephant Butte Dam near Truth or Consequences, New Mexico. End 862, 4th End, December 11, 1881, Post CO to AAAG DiNM on Ltr November 7, 1881, AAAG DiNM to Post CO, EB III, Frame 399.

162. End 293, February 24, 1882, Post Adj to PSigO on "L.R. 293," which is missing, ibid., Frame 482; End 291, 3d End, February 25, 1882, PSigO to Post Adj, and 4th End, February 25, 1882, Post CO to DiNM?, ibid., Frame 484; AR 1882, QM Roll.

163. T 550, December 15, 1882, Post CO to AAAG DiNM, LS I, Frame 737. Worthy of note is the use of wire brackets instead of wood.

164. O 17, January 21, 1883, Orders.

165. End 469, 3d End, April 22, 1883, Post CO to AAAG DiNM, EB III, Frame 757. It appears that First Sgt. Louis Jacobson, Company F, Twenty-third Infantry was brought to trial at a garrison court-martial. He declined to plead unless brought before a general court-martial. The court entered a not-guilty plea on his behalf, but Jacobson was found guilty and sentenced to be reduced to a private and to forfeit a month of pay. Although the sentence was approved, his previous good character and service prevented the reduction in rank (O 89, para 4, May 20, 1883, Orders). Early in November, he reappeared as an operator (End 1030, November 4, 1883, Post CO to DMo?, EB III, Frame 823).

166. Ltr 177, May 31, 1883, Post CO to AAG DMo, LS 1, Frame 787.

167. End 652, 1883, EB III.

168. AR 1884, QM Roll.

169. Ltr 296, December 20, 1884, Post CO to AAG DMo, LS I, Frame 901; T 2, January 24, 1885, Post CO to AAG DMo, ibid., Frame 902. The telegram related to a deserter from the Sixth Cavalry.

Chapter 14

ARMY DOCTORS & FRONTIER MEDICINE



The Medical Department of the U.S. Army, as we know it today, was established in 1818 when Congress passed a bill reorganizing the army's staff departments. This bill provided for a medical department and for a surgeon general. During the Revolutionary War there had been a comparable organization, but it had lasted only for the duration of the Continental Army. After the Revolutionary War, with the exception of the war scare of 1798 and the War of 1812, there was no organized medical department and no surgeon general. The few surgeons and other medical personnel were under the command of regimental or post commanders. With the passage of the 1818 bill, the army's medical staff now had its own corps organization and commander. The first surgeon general appointed was Joseph Lovell, who held the post until his death in 1836 (Ashburn 1929:39–40).

In 1855, Surgeon General Thomas Lawson, Lovell's successor, made three recommendations to Congress concerning the Medical Department: (1) that the number of medical officers be increased, (2) that hospital stewards be enlisted as a permanent part of the Medical Department and would belong to the noncommissioned general staff, and (3) that extra duty pay be given to hospital nurses and attendants detailed from the line. Congress granted all three requests in 1856 (Ashburn 1929:62).

The Medical Department, though, never reached a strength or competence commensurate with need. All the posts and fixed detachments merited a surgeon or assistant surgeon. The Army Acts of 1866 and 1869 met this need by providing for 222 medical officers, but by 1873 vacancies within the department were at a high of 64. One of the reasons for the vacancies was the section of the 1869 act that halted staff appointments and promotions; the other was the difficulty of attracting qualified doctors. Congress removed the ban on staff appointments in 1874, but two years later the medical staff was cut to 192. To make up for the cuts, the surgeon general contracted with 175 civilian doctors. For the most part, unless they were seeking a regular commission, the civilian doctors were not very reliable. Further exacerbating the situation, Congress limited their number to 75 (Utley 1973:87). Thus the shortage of medical personnel was a constant problem.

Likewise, the shortage of *competent* medical personnel was chronic. Many army surgeons, whether regular army or under contract, lacked the skills of their civilian counterparts as low pay and frontier discomforts discouraged many able doctors from pursuing a military career (Utley 1973:87). This is not to say that all military doctors were incompetent. Many highly skilled medical personnel did serve the frontier army posts and contributed greatly to the health and welfare of the garrisons.

Within the army there were three ranks of physicians. The first was the surgeon, whose rank corresponded to majors of the line. The second was the assistant surgeon, who ranked with line captains. The third was the acting assistant surgeon, any civilian doctor the army had under contract (Giese 1969:187). Hospital stewards were noncommissioned officers with the rank of sergeant (Reedstrom 1990:118). If no qualified stewards were available, medical personnel would hire women to serve as hospital matrons. These women cleaned the wards, washed the linen, and helped doctors care for the patients. Most hospital matrons were the wives of enlisted men or, possibly, the hospital steward (Wooster 1987:68). It is not known how many hospital matrons were employed at Fort Craig. The 1870 census for Contadero Precinct, which encompasses Fort Craig, lists Elizabeth Bowman as hospital matron. Her husband, Charles, is listed as the hospital steward (see Appendix 3). The Table 14.1 lists the surgeons and stewards stationed at Fort Craig as gleaned from the post returns.

Medical staff were assigned to a post, not to whatever unit happened to be garrisoned there at the time. Thus, the term of duty at a post could be fairly long. Several of the Fort Craig medical personnel were stationed there for well over a year. Assistant Surgeon Glover Perin, for example, served two tours at Fort Craig. The first tour lasted from September 1855 to March 1857, and the second spanned the period from September 1857 to April 1860.

While this method of assignment provided continuity in medical care, it did have drawbacks. Surgeons did not have the authority to discipline soldiers, whether helpers or patients, and had to rely on the men's officers in such instances. The officers were not always cooperative in meting out the necessary discipline. In the same vein, a surgeon's recommendations to the commanding officer regarding sanitary conditions were not always acted on in a timely manner (Lavender 1983:139).

Sometimes the surgeon and the post commander would disagree, and if the situation could not be resolved, the doctor was assigned to another post. Robert H. McKay, post surgeon at Fort Craig for part of 1869, related the following incident regarding his assignment (McKay 1918:24):

> Along the first part of May of that year I received orders from the chief medical officer of the district to exchange places with Dr. Seguin, post surgeon at Fort Craig. General Grover was the commanding officer at Fort Craig and was considered a good deal of a Martinet. As explained to me by Doctor Seguin, it seems that Mrs. Grover wanted something from the hospital which the doctor declined to send her and General Grover thereupon ordered it sent. The doctor disobeyed the order and the matter was carried to district headquarters and probably higher up for it involved the question of military discipline and also the rights of medical officers under army regulations. It is well enough here to say that the medical corps is a corps to itself, distinct from any other branch of the service, and orders come through the medical officers from the surgeon general down to the divisions; departments and districts, and yet at the military post the commanding officer is supposed to be "monarch of all he surveys" so you see there was a chance for controversy. Any way it was settled by Doctor Seguin being ordered to Fort Selden to take my place and I to his at Fort Craig.

The primary responsibility of the post surgeon was the general health of the garrison. While nineteenth-century medicine may not have recognized the specific causes of disease, the army placed great emphasis on disease prevention, basically through sanitation and ventilation. Post surgeons were required to inspect buildings and grounds for proper cleanliness and drainage as well as to monitor diet, food preparation, and water supply (see Chapter 10). Ironically, cleanliness was not associated with microorganisms; for example, the *Hospital Steward's Manual* recommended that instruments be washed in tepid water as hot water would crack the wooden handles (Soubier and Brown 1989:3).

Table 14.1. List of Fort Craig Medical Personnel, 1854–1885

Name	Position	Starting	Ending	Comments
W. J. H. White	Ass't. Surgeon	March 30, 1854	December 30, 1854	
Charles Sutherland	Ass't. Surgeon	January 1855	August 1855	
Glover Perin	Ass't. Surgeon	September 1855	March 16, 1857	
Alexander Campbell	Hospital Steward	March 16, 1857	April 1859	In arrest May 1858–April 1859
Glover Perin	Ass't. Surgeon	September 25, 1857	April 1960	Transferred April 23, 1860
John V. McIntosh	Hospital Steward	July 1860	August 1860	
Gilman Carman	Hospital Steward	August 1860	March 1861	
Basil Norris	Ass't. Surgeon	September 1860	May 30, 1861	Transferred
J. H. Bill	Ass't. Surgeon	May 30, 1861	December 1861	
I. T. Chisolm	Ass't. Surgeon	August 1861	August 1861	
Louis Farringray	Hospital Steward	August 1861	August 1861	
A. L. Gray	Surgeon NM Vols.	September 1861	October 1861	Leave
John V. McIntosh	Hospital Steward	August 1861	December 1862	
Philip Walsh	Hospital Steward	September 11, 1861	October 30, 1861	
B. A. Clements	Surgeon	October 1861	March 1862	
Richard Wahl	Hospital Steward	October 1861	November 1861	Transferred to Ft. Union
J. C. Bailey	Ass't. Surgeon	November 1861	January 1862	Transferred to field
J. H. Bill	Ass't. Surgeon	January 1862	April 1862	
Basil Norris	Ass't. Surgeon	February 1862	September 1862	
A. L. Gray	Surgeon NM Vols.	April 1862	April 1862	
Richard Wahl	Hospital Steward	May 1862	June 1862	
Joseph Bailey	Ass't. Surgeon	June 1862	August 1862	
— Shea	Attendant	August 1862	August 1862	
— Clement	Attendant	August 1862	August 1862	
Joseph Carmot	Extra duty	September 1862	September 1862	
William W. Fooz	A.A. Surgeon	October 1862	December 1862	
John Kirkpatrick	Attendant	October 1862	October 1862	
D. A. Holden	A.A. Surgeon	January 1863	January 31, 1863	
Wm. McDermott	Hospital Steward	January 1863	January 31, 1863	
John Prentiss	Surg. 1st Cav CV	February 1863	July 10, 1863	Transferred to Ft. Wingate
John McIntosh	Hospital Steward	February 1863	March 1863	
Joshua Owens	Surgeon US Vols.	July 10, 1863	September 30, 1863	Dismissed
Rudolph Tanezky	Ass't. Surgeon	October 1, 1863	December 28, 1863	Transferred to Ft. McRae
David Sturgeon	Surgeon US Vols.	December 28, 1863	February 28, 1864	Transferred to Santa Fe
George Oliver	Surgeon US Vols.	March 1864	July 1864	On leave to Franklin
John Prentiss	Surg. 1st Cav CV	April 1864	April 1864	Joined from Los Pinos

Table 14.1. Continued—

Name	Position	Starting	Ending	Comments
James Role	Hospital duty	April 1864	April 1864	
Rudolph Tanezky	Ass't. Surgeon	July 1864	August 1864	in arrest
George Oliver	Surgeon US Vols.	August 1864	October 1864	
Wm. E. Strong	Ass't Surgeon	September 1864	September 1864	Await transfer to Ft. Bowie
Henry Feldman	Hospital Steward	August 1864	before October 1867	post returns missing
Sylvester Rankin	Ass't Surg. 1st NM	October 1864	March 1865	Resigned
George Courtwright	Ass't Surg. US Vol.	March 1865	September 30, 1865	
Robert A. Christian	Contract Surg.	October 23, 1865	August 1866	
John Shout	Surg. 1st NM Vol.	August 1866	October 9, 1866	Mustered out
Joseph Taylor	A.A. Surg. USA	November 1866	December 7, 1866	
Wm. T. Day	A.A. Surg.	December 30, 1866	before October 1867	post returns missing
William B. Lyon	A.A. Surg. USA	December 14, 1867	March 4, 1868	Ordered to Ft. McRae
Charles Bowmer	Hospital Steward	October 1867	February 28, 1871	
Ely McClellan	Ass't Surgeon USA	April 1868	May 16, 1868	Transferred to Ft. Garland
Edward Seguin	A.A. Surgeon	May 1868	January 8, 1869	Contract canceled
William Armour	A.A. Surg. USA	February 11, 1869	March 30, 1869	Assigned January 8,1869
R. H. McKay	A.A. Surg. USA	April 1869	October 13, 1869	Citizen
A. J. Gray	Post Surgeon	October 13, 1869	November 7, 1869	Transferred to Ft. Bayard
W. R. Brewer	Post Surgeon	November 1869	July 31, 1870	Citizen
H. G. Federman	Citizen Physician	March 2, 1870	March 12, 1870	on way to Camp Bowie A.T.
H. G. Federman	Citizen Physician	August 1, 1870	August 31, 1870	Transferred from Reg. Gar.
Samuel Kitcham	Post Surgeon	September 1870	October 5, 1870	Relieved from duty, Citizen
W. R. Brewer	Post Surgeon	November 17, 1870	July 2, 1871	Transferred to Ft. Selden
Charles Harcourt	Hospital Steward	March 1871	December 30, 1872	Spent most of duty in arrest
H. S. Turrill	Post Surgeon	July 1871	June 1872	Transferred to Ft. Union
Charles E. Maas	Hospital Steward	October 1871	September 30, 1872	
August V. Clossman	Hospital Steward	April 1872	April 1872	
H. G. Federman	Post Surgeon	June 1872	November 19, 1872	Transferred to Fort Stanton
A. N. Ellis	Post Surgeon	November 1872	October 28, 1873	Transferred to Santa Fe
Henry Feldman	Hospital Steward	October 1872	April 30, 1873	
Emil Wagner	Hospital Steward	August 1873	April 1878	Transferred to Ft. Garland
J. J. MacGruder	Post Surgeon	October 23, 1873	December 3, 1873	Transferred to Ft. Bayard
J. Frazer Boughter	Post Surgeon, Citizen	December 1873	December 29, 1875	Relieved from duty
R. E. Smith	Ass't. Surgeon	December 1875	February 11, 1876	Relieved from duty
John H. Collins	Post Surgeon	February 1876	June 7, 1877	
W. B. Lyon	Post Surgeon	November 1876	February 1877	Transferred to Ft. Selden

Table 14.1. Continued—

Name	Position	Starting	Ending	Comments
John. H. Collins	Post Surgeon	February 1877	June 7, 1877	Relieved from temp. duty
W. J. Wilson	Ass't. Surgeon	April 1977	May 1978	
Dennis Scanlon	Hospital Steward	May 1878	August 1978	
J. S. Martin	A. A. Surgeon USA	June 1878	August 1878	Transferred to Ojo Caliente
M. G. Cockey	A.A. Surgeon USA	August 1880	January 15, 1881	Transferred to Ft. Cummings
J. H. Collins	A.A. Surgeon	January 13, 1881	December 1882	Transferred to Ft. Gibson
Joseph Junker	Hospital Steward	December 1880	April 1882	
John J. Kane	Ass't. Surgeon USA	September 5, 1881	November 1882	On leave for 2 months
C. A. Sewall	A.A. Surgeon	March 1882	April 26, 1882	Returned to Ft. Cummings
Charles Primbs	Hospital Steward	August 25, 1882	January 1884	
F. S. Dewey	A.A. Surgeon	November 1882	January 1883	Transferred to Ft. Union
John J. Kane	Ass't Surgeon	February 1, 1883	March 26, 1883	In field with 4th Cav until Sept, transferred to Dept. of East
Walter Whitney	A.A. Surgeon	April 12, 1883	September 18, 1883	On leave for one month
John H. Lacey	A.A. Surgeon	September 18, 1883	November 6, 1883	Returned to Ft. Cummings
Walter Whitney	A.A. Surgeon	October 28, 1883	October 11, 1884	Sent to Ft. Elliot, Texas
Ludwig Stamm	Hospital Steward	January 24, 1884	May 1884	
Christopher Skeels	Hospital Steward	June 22, 1884	October 1884	Transferred to Ft. Wingate
Walter D. McClard	Ass't Surgeon	November 8, 1884	December 2, 1884	Casually at post in charge of shipping hospital property from Ft. Craig, sent to Ft. Lyon, Colorado on Dec. 2

There were no medical personnel at the post during its final months of operation from January to June 1885.

A.A. Surgeon = Acting Assistant Surgeon

In 1874, the position and duties of the post surgeon as a sanitary officer was clearly defined by General Order No. 125 (Billings 1875):

GENERAL ORDER No. 125
WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE
Washington, November 17, 1874

An important part of the duty of a medical officer of the Army is the supervision of the hygiene of the post or command to which he is attached, and the recommendation of such measures as he may deem necessary to prevent or diminish disease among the troops.

For this purpose he shall at least once a month examine and note in the medical history of the post the sanitary condition of the quarters, including all buildings belonging to the post, the character and cooking of the rations, the amount and quality of the water supply, the drainage, and the clothing and habits of the men, and make a report thereon in writing to the commanding officer, with such recommendations as he may deem proper. If the recommendations be approved and carried out, the medical officer shall note the fact in the medical history of the post. If the action recommended be deemed impracticable or undesirable, the commanding officer shall endorse his objections on the report and forward it to the department commander. A copy of such endorsement shall be furnished to the medical officer, who shall record it in the medical history of the post.

The annual sanitary reports now required from medical officers shall in future be forwarded through their commanding officers, who shall forward them through regular channels, with such remarks as shall be deemed necessary.

The same course will be taken with the special sanitary reports called for by Circular Orders No. 2, Surgeon-General's Office, October 15, 1874, which as modified, is as follows:

"Medical officers will forward, with the sanitary reports of December 31, 1874, a special report on the following subjects, to be made as full and be as carefully prepared as possible, as the results are desired for publication:

I. On the food of the Army, its quantity, quality, and mode of preparation. What is the character of the articles forming the regular ration as furnished to the post? What is the average amount of saving for post fund? What articles of food, and in what amount, are purchased by the post fund, obtained from the post garden, or by hunting or fishing? Ice, how obtained and in what quantities furnished? How is the cooking done for the men? Give bill of fare for a week at different seasons. Is the food of the men inspected daily? How often is it inspected by the medical officer? Have any complaints been made by the men about the food, and have any cases of disease occurred which may be attributed to the food or its mode of preparation? If so, specify. Character of kitchens and bakery fixtures. Has any special apparatus, such as the Warren cooker or the felt box, been tried? If so, give results. Character and amount of extra articles furnished by the Commissary Department for Officers' use. Diet of the sick, and hospital fund. Remarks, suggestions, and recommendations.

II. Duties of medical officers in scouting parties and expeditions. Nature and amount of medical supplies required; how carried. Means of transportation for the wounded, Remarks.

III. On military punishments and their effect on the health and morale of the soldier. Give instances, recommendations, &c.

IV. Personal cleanliness of the men. What are the post regulations, if any, with regard to bathing? What facilities are afforded? How often are the men's blankets washed?

The above report must be forwarded promptly through the proper channel to the medical director on or before January 1. Medical directors will forward them through the department commanders, with their own observations and comments on the points above referred to."

The medical history of the post shall be kept with the hospital records and shall not be removed therefrom. It shall be open to the examination of the commanding officer, and the attention of the inspecting officers is especially directed to this book, and they will report the manner in which it is kept.

By order of the Secretary of War:

E. D. TOWNSEND
Adjutant-General

As noted above, the surgeon's primary concern was the general health of the garrison. Most of the nondisease use of the hospital stemmed from injuries. Men cut themselves with tools used in routine duty and occasionally shot themselves or other soldiers accidentally. Battle wounds were relatively rare, and it was quite possible for a man to spend his tour at a post without being involved in a single skirmish with Indians. Other injuries resulted from being kicked by horses or falling from them. Brawls with civilians and other soldiers often resulted in injury or death, as evidenced by the following letter sent to the commander of Fort Selden (NARS RG 98, Letters Sent, Frame 575 [NARS]):

Head Qrs. Fort Craig NM
November 26th, 1870

Officer Commanding
Fort Selden NM

Sir

I have the honor to inform you that Private William Howard, "I", 8th Cavalry was killed by a Mexican at the town just opposite this Post of the 23rd Day of November 1870 and was buried in the Post Cemetery on the 24th.

At the same time Private Patrick Murphy was badly injured and is now in Hospital unable to travel. Private David Colliers was also somewhat injured and was arrested by the Civil Authority, tried and acquitted. Blas Chaves the Mexican who killed Howard was remanded for trial by District Court.

All three of the soldiers were absent without leave at the time and had their pistols with them. I have recovered two of the Pistols and sets of accoutrements complete as follows. Viz:

1 Rem Pistol No. 123965
one nipple broken
1 Rem Pistol No. 121865

And have turned them over to Sergeant Hearndem in charge of detachment. The other pistol was undoubtedly stolen by some Mexican in the melee resulting in Howard's death.

Enclosed I forward inventory of effects in blank form. Dr. Brewer to enable the Company Commander to complete returns to Adjutant General.

I also enclose order of David, Pvt. Colliers to pay me seven ($7.00) dollars money advanced to pay his expenses on Civil Trial with request that Company Commander forward it to me when collected, if ever.

I Remain Sir
Very Respectfully
Your Obdt. Servt.
F. W. Coleman
Captain 15th Infantry
Comdg. Post

Most of the diseases treated by the surgeon consisted of respiratory ailments and intestinal upsets. While smallpox was kept under control by vaccination, there were outbreaks of typhoid fever, cholera, and tuberculosis. The following report written by Robert Christian, Acting Assistant Surgeon at Fort Craig, presents a six-month summary of the diseases treated at the post hospital (NARS RG 98, Letters Sent):

Fort Craig NM
March 31, 1866

Col. F. P. Ahreú
1st Infantry NM Vols
Commanding Post

Sir,

Agreeable to your instructions dated today, I have the honor to report for the information of the

Inspector General the following as the ratio of sick for the past six months together with the name of the prevailing and principle [*sic*] diseases.

Month	Mean Strength			Number Treated	Ratio of Sick per 1,000
	Officers	Enlisted Men	Total		
October (1865)	20	288	308	39	126
November	21	367	388	56	144
December	20	374	394	47	119
January (1866)	17	274	291	49	168
February	10	210	220	36	163
March	9	210	219	38	173
Total	97	1723	1820	265	893
Ratio for 6 mos	16	287	303	44	148

Remarks: Fractions are not carried out in calculations

The prevailing and principle diseases which have occurred and been treated during the above times are viz: Bronchitis 47 cases, Diarrhea 24 cases, Remittent fever 10 cases, Syphilis 32 cases, Rheumatism 22 cases. Recently several cases of scurbutic diseases in the forms of Scurvy and Purpura have occurred.

Robert Christian
Acting Ass't Surg US Army

The types of diseases or injuries treated by the post surgeons at Fort Craig for the years 1868–1869, 1870–1874, and part of 1881 are presented in Tables 14.2, 14.3, and 14.4. Table 14.2 is interesting as it compares troop strength and medical information for the white and black soldiers for the years 1868–1869. Table 14.3 provides a summary of diseases for a four-year period, and Table 14.4 reflects injuries incurred in a skirmish with the Apaches during the Victorio campaign.

Venereal disease was probably the most common serious illness among soldiers at Western posts. While some of these diseases were brought to frontier forts by soldiers who had transferred from recruit

Table 14.2. Statement Showing Mean Strength, Number of Sick, and Principal Diseases of White and Black Troops at Fort Craig for the Years 1868 and 1869

	1868		1869	
	White	Black	White	Black (10 mos)
Mean Strength	49.5	118.33	63.5	103.4
Whole Number Taken Sick	61	281	57	56
Malarial Fevers	1	10	5	9
Typhoid Fever	—	1	—	—
Diarrhea and Dysentery	21	70	10	18
Tonsillitis	2	11	1	—
Venereal Diseases	7	10	5	2
Scurvy	—	19	—	—
Rheumatism	—	22	1	3
Phthisis	1	—	—	—
Catarrhal Affections*	6	43	6	4
No. of Deaths	1	2	—	2

* includes laryngitis, bronchitis, pneumonia, and pleurisy

Table 14.3. Consolidated Sick Report, Fort Craig, 1870–1874 (from Billings 1875:252)

Year		1870–'71		1871–'72		1872–'73		1873–'74	
Mean Strength	Officers	6		5		4		3	
	Enlisted Men	139		72		75		46	
		Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
GENERAL DISEASES, A.									
Typhoid fever		1	...	1	...	2	...	...	...
Typho-malarial fever		1	...	...	...	...	...	...	...
Remittent fever		...	...	...	...	...	...	1	...
Intermittent fever		12	...	7	...	8	...	5	...
Other diseases of this group		4	...	2	...	4	...	3	...
GENERAL DISEASES, B.									
Rheumatism		7	...	10	...	11	...	3	...
Syphilis		19	...	11	...	14	...	2	...
Other diseases of this group		4	...	...	...	...	...	...	...
LOCAL DISEASES									
Catarrh and bronchitis		7	...	13	...	2	...	4	...
Pneumonia		...	...	...	...	...	...	1	...
Pleurisy		3	...	...	...	...	...	2	...
Diarrhoea and dysentery		17	...	12	1	13	...	4	...
Hernia		...	...	...	...	1	...	...	...
Gonorrhoea		7	...	2	...	5	...	3	...
Other local diseases		27	1	20	...	25	1	19	...
Alcoholism		8	...	16	...	22	...	5	...
Total disease		117	1	94	1	107	1	52	...
VIOLENT DISEASES AND DEATHS									
Gunshot wounds		2	...	...	...	1	...	1	...
Other accidents and injuries		21	...	21	...	28	...	15	...
Homicide		...	1	...	...	...	...	...	1
Suicide		...	...	...	1	...	...	...	...
Total violence		23	1	21	1	29	...	16	1

Table 14.4. List of Enlisted Men in Hospital for August 1881 (from Post Returns)

Name	Rank	Unit	Description of Illness
Monroe Johnson	Cpl	9th Cav. Co. I	Gunshot wound of right torso achilles, rec'd. in action
George F. Adley	Pvt	9th Cav. Co. I	Remittent fever, rec'd. in line of duty
Norman E. Gaines	Pvt	9th Cav. Co. I	Gunshot wound of thorax at left nipple, rec'd. in action
William Woodland	Pvt	9th Cav. Co. D	Accute rheumatism, contracted in line of duty
Jerry M. Stone	Pvt	9th Cav. Co. K	Rupture of liver by horse falling on him while in action
Washington Pennington	Pvt	9th Cav. Co. K	Gunshot wound of left side penetrating cavity, in action
John S. Shidall	Pvt	9th Cav. Co. K	Gunshot wound of left side penetrating cavity, in action
George W. Craw	Pvt	13th Inf. Co. I	Acue contracted in line of duty
J. J. Wiske	Pvt	13th Inf. Co. K	Constitutional syphilis, not contracted in line of duty

depots and Eastern stations, most of the infections came from contact with prostitutes who worked at the fort or lived on "hog ranches" very near the military reservations (Rickey 1963:328–330).

Like other military installations within New Mexico, Fort Craig had its problems with women of ill repute, both within and at the margins of the Fort Craig military reservation. In the mid-1860s, several alleged prostitutes were living at the Valverde Hotel, located a few hundred yards north of the officers' quarters. As soon as their existence became known, the post commander issued a directive for their removal (NARS RG 98, Letters Sent, Frame 50).

Head Quarters Fort Craig NM
April 15, 1865

To the Proprietor of the Valverde Hotel
Fort Craig, NM

Sir:

I am credibly informed that women of bad character and mistresses of some gentlemen at the Post are permitted to lodge and live at your house. If then, any of these you will have them leave at once, or they will be removed by the Guard and your house turned over to the Government for better purposes.

I am Sir &c
E. A. Rigg
Lieut Col. Comdg.

The prostitute problem appeared to be more acute on the outskirts of the reservation. Both General Estanislaus Montoya and William Milligan had ranches very near or within the boundaries of the Fort Craig military reservation. Numerous questionable women lived at these ranches, and their presence posed problems for the troops (NARS RG 98, Letters Sent, Frames 169 and 170):

Head Qtrs Fort Craig
March 13, 1865

Montoya Genl Estanislaus
On U.S. Reserve Fort Craig

General

I would call your attention to the fact that a large number of women mostly prostitutes have congregated about the building erected by you for working on this Reservation and are causing much trouble by enticing the enlisted men of this Post to their houses. Also that liquor is sold there and almost every night dances given for soldiers, this must be stopped and no one but your own employees allowed to live there.

I am General
Very Respectfully Yours,
Edward B. Willis
Lt Col 1st N M Inft
Comdg

Hd Qtrs Fort Craig NM
March 13, 1865

Milligan Mr. W.
Fort Craig Reservation

Sir

I am informed that the people on your ranch are in the habit of giving dances for the Soldiers one being given Saturday night also that they furnish liquor to the men. Please have this stopped and allow no one to live there who is not working for you especially women.

Very Respectfully
Your Obdt Servt
Edward B. Willis
Major 1st N M Inft
Comdg

Head Quarters Fort Craig NM
October 25th 1865

Montoya, Estanislaus
Ancon
Gov't Reserve

Sir:

Two men have been killed this morning, the result of women of bad character being permitted to live at Ancon. You will without delay remove every one now living on the Reserve at Ancon, not immediately connected with the laborers employed by you. None but their legitimate families will be permitted to reside there.

All others must leave the reserve at once . . . and no more buildings will be erected at the Ancon without permission from the Commanding Officer at Fort Craig . . .

Routine illnesses and injuries were primarily treated with iodine, alcohol, quinine, castor oil, morphine, Blue Mass pills (which contained mercury), mustard plasters, and flaxseed tea and plasters. One of the most important drugs in a doctor's medical kit was opium. A universal painkiller used for a myriad of illnesses, opium was administered in a variety of forms—as a tincture (laudanum), in pills, or as morphine. Morphine sulphate was sprinkled directly onto wounds, and a quarter or half grain of opium, in combination with leeches or cupping, was applied to gunshot or knife wounds to control pain and prevent shock. Often opium was combined with other drugs to combat certain illnesses. Dysentery, for example, was treated with Dover's Powder, a mixture of one part opium, one part ipecac, and eight parts "sugar of milk" (Woosley 1980:7).

Drugs and vaccines were often in short supply but whiskey and quinine were always on hand. At some Western posts that were generally considered unhealthy, the troops were routinely given a daily dose of whiskey laced with quinine as a preventative tonic (Rickey 1963:130–133). Dr. William Anderson, the post surgeon for Cantonment Burgwin (near Taos) between 1856 and 1861, listed the following medical supplies as being on hand in 1858 (Woosley 1980:5). Note that the ratio of alcoholic beverages to medicines is almost 1:1!

Glycerine, 2 oz.	Madeira, 1 doz. bottles	Finet-ferric Chloride, ¼ lb.
Arsenic, 3 lb.	Spirits of ether nitric, ¼ lb.	Sodae. bicarb., 2 lb.
Aromatic Sulphuric Acid, ¼ lb.	Potassium Nitrate, ½ lb.	Pith. of Sassafras, ½ oz.

Alcohol, 2 gal.
Citric Acid, ¼ lb.
Wine, cooking, 1 gal.
Washing sponge, 8 to 10 oz.
Brandy, cooking, 1 gal.
Wine, sherry, 1 doz. bottles
Whiskey, Scotch or Irish, 1 gal.
Lycopodium, 1 lb.
Brandy, best quality, 2 gal.
Port, 1 doz. bottles

Carbolic acid, which was used as an antiseptic, appeared at Western forts in the late 1860s/early 1870s. Unfortunately, it was usually splashed on everything *but* the doctor's hands and the amputation tools, which were often just rinsed in a bucket of water. Ether and chloroform functioned as anesthetics (Rickey 1963:130–133; Woosley 1980:6).

Wounds were treated in one of two ways—cauterization or amputation. For gunshot wounds to the limbs, amputation was the most common practice of military doctors. A standard amputation kit is shown in Figure 14.1. All wounds were left open and drained, as it was thought that wounds only healed through the suppuration process. In other words, dead tissue lining the wounds was thought to be discharged as pus, and the wounds were left open to allow for draining. Many soldiers died as a result of this practice (Woosley 1980:6).

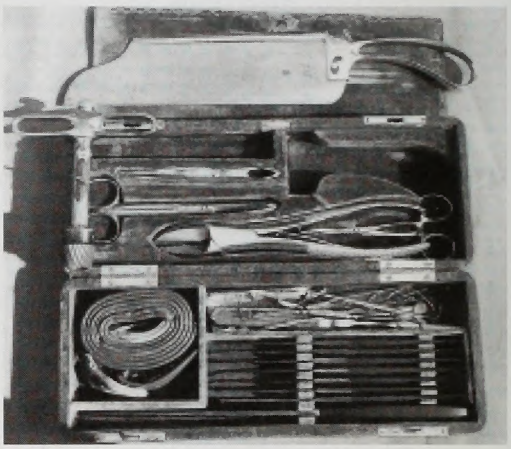


Figure 14.1. *A surgeon's amputation kit (from Reedstrom 1990:121).*

Diseases stemming from dietary deficiencies, especially scurvy, were common among the soldiers. Table 14.5 lists the number of cases of scurvy reported for the Department of Missouri between the years 1868 and 1874.

Table 14.5. Number of Cases of Scurvy Reported for the Department of Missouri, 1868–1874

Post	1868	1869	1870	1871	1872	1873	1874
Arbuckle, Fort, Indian Territory	—	2	—	—	—	—	—
Bayard, Fort, New Mexico	—	—	3	—	—	—	—
Beecher, Camp, Kansas	—	2	—	—	—	—	—
Canadian River, Indian Territory	1	—	—	—	1	—	—
Craig, Fort, New Mexico	—	—	1	—	—	—	—
Dodge, Fort, Kansas*	1	15	1	1	—	—	—
Garland, Fort, Colorado	—	1	1	2	—	—	—
Gibson, Fort, Indian Territory	—	—	—	—	—	10	5
Harker, Fort, Kansas	—	4	—	—	—	—	—
Hays, Fort, Kansas	1	2	—	—	—	—	—
Larned, Fort, Kansas	1	—	—	—	—	—	—
Lyon, Fort, Colorado	—	2	2	—	—	2	—
McRae, Fort, New Mexico	12	2	—	—	—	—	—
Ogallalla Stm., Kansas	1	—	—	—	—	—	—
Republican River, (near), Kansas	3	—	—	—	—	—	—
Sill, Fort, Indian Territory	—	2	3	7	7	—	2
Supply, Camp, Indian Territory	1	1	1	2	2	—	1
Sumner, Fort, New Mexico**	1	—	—	—	—	—	—
Union, Fort, New Mexico	—	1	2	4	2	5	—
Wallace, Fort, Kansas	—	22	1	—	—	—	—
Willow Springs, Colorado	—	—	2	—	—	—	—
Wingate, Fort, New Mexico	1	2	—	—	—	—	—
Wichita, Camp, Indian Territory	—	1	—	—	—	—	—
Miscellaneous							
Field, Indian Territory	2	1	—	—	—	—	—

* Camp near Fort Dodge; ** Closed after 1868

During this period only one case, in 1870, was reported for Fort Craig, whereas Fort Union, which was the major supply depot for New Mexico, reported 14 cases in the five-year period. To help combat or prevent scurvy, molasses was issued periodically to the troops, as evidenced by the following communication (NARS RG 98, Letters Sent and Received):

D. No. 5 1867 Fort Craig NM, Jan. 21, 1867

Day, W. T., Post Surgeon states that there are few cases of scurvy in the command and recommended that molasses be issued to the companies for a time, to overcome the tendency of scorbutic disease, there being plenty of molasses in the commissary.

Respectfully referred to Bvt. Captain Chas. Meinhold, ACS who will issue the molasses to the cos. as recommended by the surgeon, if it is in the commissary.

Hospitalized soldiers were usually given specially cooked rations, such as vegetables, eggs, butter, and milk when they were available. The Medical Department also furnished a considerable quantity of food for the sick, known as hospital stores, which consisted of such items as arrowroot, farina, cornstarch, tea, and sugar. With the regular rations, hospital stores, occasional dishes from the table of the medical officer, and, in some instances, orders for the better cuts of meat, the sick were satisfactorily fed (Billings 1875; NARS RG 98, Letters Sent; Rickey 1963:133).

Headquarters Fort Craig
December 13, 1863

To the Commissary at Fort Craig.

Sir:

Issue to the Hospital for the sick choice portions of beef and such as may be selected by the Hospital Steward.

Edwin A. Rigg
Col. 1st Inf. CV, Commanding

To supplement the hospital ration, foodstuffs were also purchased from the local populace. Table 14.6 lists the amounts and principal items purchased through Fort Craig's hospital fund for a four-year period ending December 31, 1873, and provides an interesting glimpse of food prices at the time.

Table 14.6. Hospital Fund Expenditures for Four-Year Period Ending 31 December 1873

Number of rations				9,761
Average cost of ration (cents)				23.30
Amount due the hospital				$ 2,274.40
Value of issues by the commissary				$ 2,087.40
Milk	Number of gallons	$105^{7/8}$	Amount expended	$ 44.20
Eggs	Number of dozen	$17^{1/2}$	Amount expended	$ 7.00
Butter	Number of pounds	61	Amount expended	$ 23.60
Chickens	Number of chickens	8	Amount expended	$ 4.00
Amount expended for miscellaneous articles				$ 171.88
Total amount expended				$ 258.68

William Milligan, who, as noted earlier, had a ranch at the edge of the military reservation, was one of the local people who sold produce to Fort Craig. In 1868, Milligan had potatoes to sell to the post, apparently for a higher price than could be found elsewhere (NARS RG 98, Letters Sent and Received).

Hdqrs. Fort Craig N.M.
August 29th 1868

Bvt Maj. Chas. McClure
Chief Commissary Dist. New Mexico
Thro. Hdqrs. District New Mexico
Santa Fe. N.M.

Sir:

I would state for your information that Mr. Milligan has for sale and offers to furnish this garrison with potatoes on the following terms—delivered at the post from time to time as needed by troops, well washed etc. at 8¢ per pound. The potatoes are very fine and the troops are much in need of vegetables. This price although much greater perhaps than would be asked further up the country, I think cheaper in the end, as it saves transportation and proposed place of delivery saves to the Government loss heretofore experienced from not bruising etc. I should respectfully recommend that the A.C.S. at this Post be directed to make this purchase for sale to officers, issue to Hospital and to the Troops of the Garrison. The potatoes are nearly mature and excellent for use at this time.

I am Major
Very Respectfully
Your Obt. Servt.
H. C. Corbin
Capt. 38th Inf.
Bvt. Lt. Col.
Commanding

While some diseases were specifically attributed to diet, others were believed to be airborne. Impurities in the air were believed to produce cholera, gangrene, typhoid, and others. Consequently, surgeons were responsible for monitoring the weather on a daily basis and recording such variables as high and low temperatures, precipitation, cloud cover, wind velocity, and wind direction (Woosley 1980:6). Table 14.7 presents a meteorological report recorded at Fort Craig for a four-year period (Billings 1875:252).

In addition to the routine hospital duties, surgeons and/or hospital stewards were often sent out to accompany scouting expeditions, especially during Indian campaigns. A surgeon's field kit is depicted in Figure 14.2. The following communication to headquarters in Santa Fe lists the personnel dispatched from Fort Craig for a campaign against Navajos and Apaches (NARS RG 98, Letters Sent and Received).

Hd. Qrs. Fort Craig N.M.
January 1st, 1868

To/
The Asst. Adjt. General
Hdqrs. Dist. of N.M.
Santa Fe, N.M.

Sir:

I have the honor to report that pursuant to instructions received from the Hdqrs. Dist. of N.M. in Official Letter dated Dec. 22nd 1867, I have today sent out on a scout, against the Indians on the headwaters of the Mimbres and other Apaches and hostile Navajos, of as large a force as can be spared from this Post and consisting of troops etc. as follows.

	Mounted	Not Mntd	Officers	Total
Company B 3rd Cav	39	-	3	42
Detachment 38th Inf.	7	23	-	30
Provisional Co. of Vols	55	-	-	55
Actg. Asst. Surg.	1	-	-	1
Hospital Steward	1	-	-	1
Total	102	2	4	129

They were provided with 20 days rations, I was unable to give more than 3000 pds. of corn, for want of enough pack saddles—but in addition to that two days corn was sent as far as Fort McRae in a wagon. Capt. Meinhold 3rd Cav. in Command was of the opinion that his animals would do very well on that amount of forage. The provisional company of Volunteers is made up of citizens of Paraje and others about here who have been accustomed to scouting and acting as spies and guides, and I think will be of great service—I furnished them with twenty days rations of bacon, hard bread, sugar, and coffee and the necessary ammunition and gave them the use of two mules and a horse and five Carbines. In every other respect they furnished themselves. Part of the Infantry was mounted in order that men becoming footsore or otherwise unfit to march could ride. I found it necessary to order the Q.M. to hire two packers and would respectfully ask that my order in the case be approved from your hdqrs.

I am Sir
Very Respectfully
Your obt. Sevt.
C. Grover
Lt. Col. 38th Inf.
Bvt. Maj. Gen. Comdg.

Alcoholism was a major problem at most frontier forts, and many health problems were attributed to excessive drinking. Post surgeons were constantly pointing out the links between drunkennness and disease (Wooster 1987:199). Unfortunately, despite their warnings, post surgeons themselves were not immune to the problem. Given the heavy emphasis on medicinal liquors and their availability in the hospital dispensary, it is not surprising that some doctors fell victim to the disease. Such was the case of George Oliver, Fort Craig's surgeon from March to October 1864, who had to resign his position because of it. The following communication is an endorsement of a letter written by Dr. Oliver requesting the acceptance of his resignation (NARS RG 98, Letters Sent and Received).

Table 14.7. Meteorological Report, Fort Craig, 1870–1874 (from Billings 1875)

	1870–'71				1871–'72				1872–'73				1873–'74			
	Temperature			Rainfall	Temperature			Rainfall	Temperature			Rainfall	Temperature			Rainfall
Month	Mean	Max.	Min.	in inches	Mean	Max.	Min.	in inches	Mean	Max.	Min.	in inches	Mean	Max.	Min.	in inches
July	78.16	98	59	2.45									85.05	104*	57*	0.10
August	74.53	96	59	3.61	77.30	99	54*	1.13					75.26	96*	56*	1.80
September	69.14	91	42	1.00	71.03	93	52	2.33					73.17	94*	46*	1.35
October	58.36	85	34	1.05	56.35	87*	30*	0.69	57.43	80	30*	0.52	60.34	89*	25*	0.07
November	48.01	72	20	0.04	46.73	72*	27*	0.00	40.12	70	10	0.02	50.20	73*	23*	0.39
December	30.79	63	–2	0.36	36.27	68	12	0.00	41.16	66	23	0.60	39.33	74*	8*	0.04
January	35.59	60	16	0.23	28.64	69*	5*	(?)	37.23	66	5	0.02	42.15	74*	–3*	0.73
February	43.83	76	20	(?)	37.61	71	17	0.70	41.67	70	24	0.16	41.84	66*	10*	1.14
March					84.20	76*	28*	0.00	51.08	84	24	0.40	52.07	81*	26*	0.99
April					56.85	87	29	0.07	52.23	84	28	0.18	55.28	91*	20*	0.74
May					72.01	103*	41*	0.11	65.75	93	44	0.13	70.81	102*	36*	0.32
June					76.34	102*	52*	1.15	78.71	102	64	1.21	82.39	110*	51*	0.52
For the year													60.66	110*	–3*	8.19

* These observations are made with self-registering thermometers. The mean is from the standard thermometer.



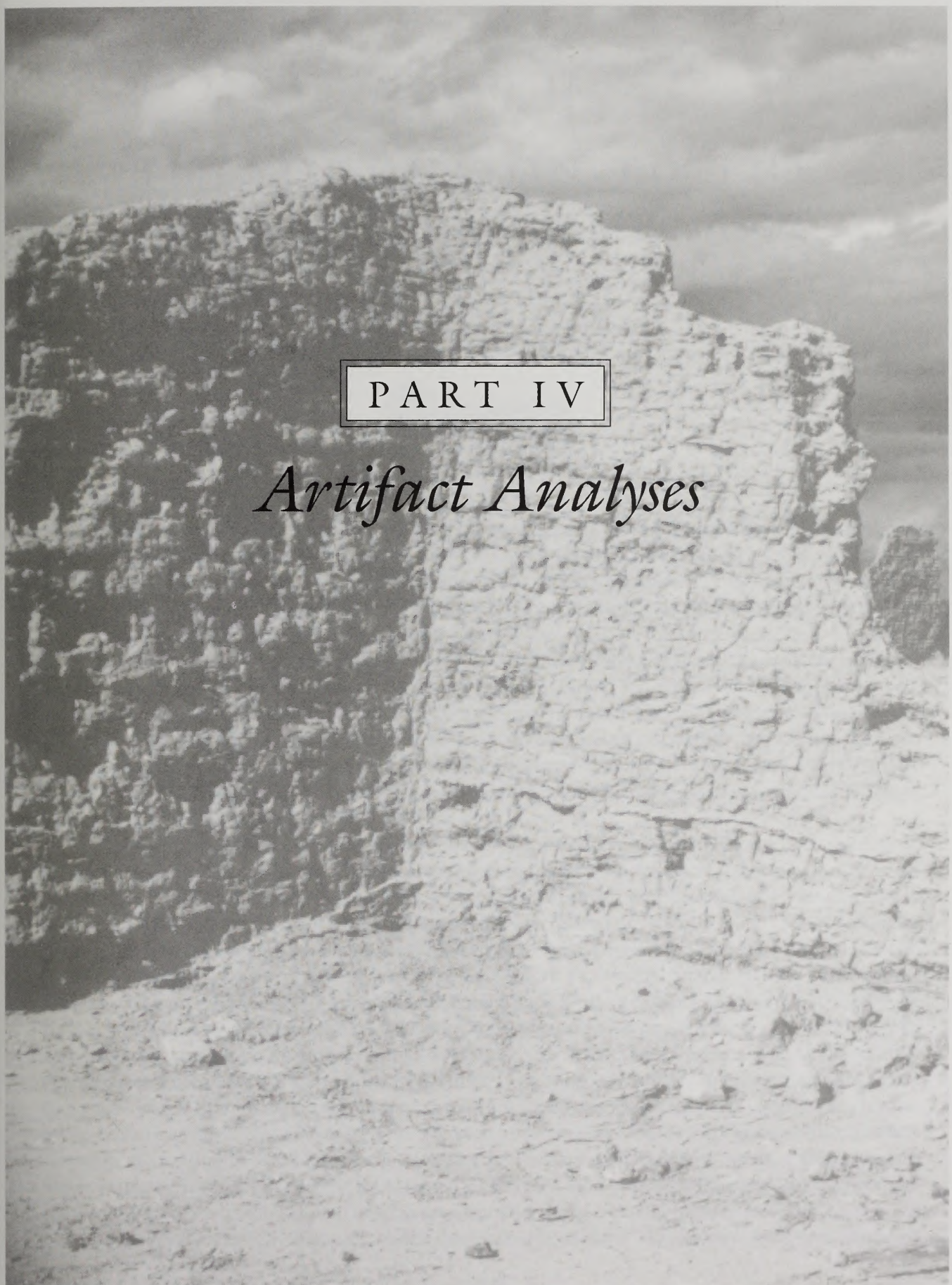
Figure 14.2. *A surgeon's field kit (from Reedstrom 1990:119).*

Headquarters Fort Craig N.M.
October 7th 1864

Surgeon Oliver has become so addicted to intemperance that I consider his reformation *hopeless*. I recommend the acceptance of this resignation by the Comdg General Dept of N.M. immediately.

Respectfully
Clarence E. Bennett
Lt. Col 1st Cav C.V., Comdg.

While most post surgeons did their best to reduce illness and mortality, death remained a real threat on the frontier, striking soldier and civilian alike regardless of rank or privilege. Surgeons and their families were no exception. While he was stationed at Fort McRae, former Fort Craig Post Surgeon Dr. Robert McKay's little daughter caught a cold and eventually died. After her death, McKay became so despondent that he contracted typhoid dysentery. He was sent to Fort Craig for treatment and did recover from his illness. McKay, himself, best sums up the state of frontier medicine in his autobiography: "while I felt a great repugnance to ever seeing this place [Fort McRae] again, I was more resigned to what I considered the inevitable that is, that death comes to everybody, is one of nature's laws, and is the culminating process, just as birth is the beginning of life" (McKay 1918:115). ✠

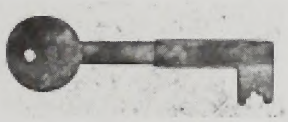


PART IV

Artifact Analyses

Chapter 15

INTRODUCTION TO THE ARTIFACT ASSEMBLAGE



THE ANALYSIS OF THE FORT CRAIG ARTIFACT ASSEMBLAGE was designed to accomplish two goals. The first goal was to assess the range of activities represented by the assemblage. The second was to place the artifacts within a chronological framework in order to separate the military occupation (1854–1885) from that of civilian occupations after the fort was closed. In order to maintain continuity, the artifacts recovered during the five seasons were analyzed following the same format.

The excavations at Fort Craig recovered 16,716 artifacts. During analysis, the artifacts were first separated by principal material type—glass, metal, ceramic, leather, and other (wood, cloth, bone, shell, etc.). Descriptive attribute data appropriate to each group were recorded (e.g., embossing, color, closure styles for bottle glass). Artifacts were then placed into functional groups that crosscut the material data sets. These functional groups are derived from classificatory schemes used in other historical studies (Hardesty 1978; Levine and Winter 1987; Maxwell 1983; Oakes 1986; South 1977) and provide a picture of the range of activities represented by the artifacts.

The assemblage can be divided among 14 different functional groups: military, household/mess, indulgences, food refuse, architecture/construction, clothing, arms/ammunition, transportation, stockraising/subsistence, furniture, personal, communication, medical, prehistoric, and indeterminate. The distribution of material types and frequency of functional groups are summarized in Tables 15.1 and 15.2, respectively. Household/mess consists of those items used in food preparation, food service, and food storage, whereas food refuse includes bones, eggshells, and other refuse from food items. Indulgences are materials not necessary for human survival, such as liquor, tobacco, and various patent extract products (patent medicines). The architecture/construction category is composed of tools, hardware, and materials used in the making and upkeep of structures. Arms/ammunition consists of ammunition and weapons. The clothing group encompasses those items that are not part of the military uniform; the military category contains not only those items related to uniforms but also accoutrements such as epaulets, equipment, and insignia. The furniture group contains any item related to the interior decoration of a building, such as pieces of furniture, furniture hardware, and lighting. Personal items include jewelry, toys, coins, and knickknacks. Transportation represents any item related to wagons and livery. Stockraising/subsistence consists of those items related to agriculture (including gardening) and animal husbandry. Communication encompasses artifacts used in the communication process—i.e., ink, pens, books, telegraph-related items. The medical category is composed

Table 15.1. Distribution of Artifact Material Types

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Glass	2056	2634	1069	2763	1312	9834
Metal	598	527	1013	613	451	3202
Ceramic	83	117	40	408	31	679
Bone	880	266	477	609	149	2381
Wood	119	32	20	28	22	221
Rubber	3	—	7	8	3	21
Leather	36	174	15	41	12	278
Stone	4	7	—	—	1	12
Cork	—	3	4	3	2	12
Paper	1	—	8	1	1	11
Horn	—	4	2	—	—	6
Chalk	—	1	—	—	—	1
Shell	2	3	13	1	5	24
Sponge	—	—	—	—	1	1
Celluloid	—	1	—	1	—	2
Brass/Glass	—	—	2	—	—	2
Organic	—	11	10	—	8	29
Total	3782	3780	2680	4476	1998	16716

Table 15.2. Artifacts by Functional Category

Functional Category	Number	Percent
Indulgences	3856	23.1
Architecture/Construction	5228	31.3
Household/Mess	874	5.2
Furniture	328	1.9
Clothing	231	1.4
Personal	76	0.5
Arms/Ammunition	304	1.8
Transportation	40	0.2
Communication	33	0.2
Food Refuse	2397	14.3
Stockraising/Subsistence	17	0.1
Military	227	1.4
Medical	148	0.9
Prehistoric	16	0.1
Indeterminate	2941	17.6
Total	16716	100.0

of items associated with the hospital and medicine. The indeterminate category represents those items whose function could not be determined. Finally, because Fort Craig was built on a prehistoric site, the prehistoric category was established to encompass those artifacts reflecting that earlier occupation.

There are problems inherent in assigning materials to a functional group as items are not always used for the purpose originally intended or may be used or reused for a variety of functions. Nevertheless, these groups provide a useful framework for examining large artifact inventories and for making comparisons with other assemblages from similar sites.

The artifact analysis results are presented in the following ten chapters. These chapters are divided according to either material type or artifact type. Chapter 16 discusses the glass artifacts and Chapter 17 examines most of the metal artifacts. These two material types constitute the two largest artifact assemblages. Chapter 18 examines the ceramic artifacts and Chapter 19 presents the results of the ammunition analysis. Rather than break out the buttons according to material types, the entire button assemblage is discussed in Chapter 20. Chapter 21 looks at the various fragments of milled lumber recovered from the buildings, and Chapter 22 discusses the textile fragments. Leather and artifacts of other material types (paper, shell, bone, horn, stone, etc.) are described in Chapter 23. Organic items that did not go to the archeobotonists, such as peach pits, are also discussed in this chapter.

The third largest artifact group, archeofaunal remains, is presented in Chapter 24. Finally, Chapter 25 describes the few macrobotanical samples obtained from several ash dumps and fireplaces. ✠

Chapter 16

GLASS ARTIFACTS



As with the majority of historical sites in the West, glass fragments are one of the most abundant artifactual materials recovered. As a category, the 9,766 glass artifacts (excluding glass buttons) collected constitute the largest material group. Bottle glass was the most common type recovered followed by window glass. Other items include chimney lamp glass, stoppers, and insulators (Table 16.1). The glass artifacts encompass eight functional categories: indulgences, architecture/construction, household/mess, furniture, personal, communication, hospital/medical, and indeterminate (Table 16.2).

BOTTLE GLASS

Since glass containers are relatively inexpensive and are usually disposable, bottles are considered sensitive time and use indicators (Fontana 1967). Both temporal and functional information can be derived from such attributes as shape, color, seams, base marks, closures, and embossing (Jones 1971; Kendrick 1963; Lief 1965; Newman 1970; Toulouse 1971; Ward et al. 1977).

Most of the bottle glass recovered consisted of small fragments, primarily body pieces. A minimum number of 309 bottles, based on analysis of the bases and four whole bottles, is represented by this assemblage. The base fragments are predominantly from alcohol/beer bottles ($n = 222$), of which 36 are kick-up bases from wine or champagne bottles. The remaining fragments consist of 14 patent-extract, 4 condiment, 3 medicine, 1 soda, 1 decorative, and 60 indeterminate pieces. The four whole bottles are a tonic bottle with cork stopper, an inkbottle, a pill bottle, and a perfume bottle. The former two bottles came from the officers' quarters, the third from the soldiers' quarters, and the fourth from the old hospital. In addition to the whole bottles, two quart-size beer bottles, a partial third beer bottle, and a partial mustard jar could be reconstructed (Figure 16.1).

Although attributes such as seams, finishes, and embossed markings were either absent or very limited, those present provided a substantial amount of information on function. Finish or closure pieces were found on 222 fragments. These pieces represent 61 different styles (Figure 16.2). With the exception of Style 47, all the closures are hand- or tool-finished, and, where present, all lip treatments are applied. The majority appear to have had cork and/or wire closures. Style 47 has a continuous-thread closure, which postdates the military occupation of the fort. This item is one of the few artifacts that clearly represents the post-military civilian occupation.

Table 16.1. Distribution of Glass Artifacts

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Alcohol/Beer	1111	1141	98	831	328	3509
Soda	—	6	—	5	—	11
Condiment/Sauce	21	47	3	18	—	89
Patent/Extract	28	61	9	154	7	259
Medicine/Prescription	2	1	—	137	—	140
Castor Oil	—	—		2	—	2
Perfume/Toiletries	—	—	2	—	1	3
Ink	—	—	1	—	—	1
Decorative	—	—	18	5	—	23
Window	653	1081	726	429	740	3629
Lamp Chimney	40	68	39	60	54	261
Stopper	—	1	1	1	4	7
Insulator	2	—	—	3	2	7
Tube	—	—	—	1	4	5
Slide	—	—	—	2	—	2
Beaker	—	—	—	—	2	2
Mirror	—	—	4	—	—	4
Lamp Crystal	—	—	—	1	—	1
Tumbler	—	1	1	1	—	3
Marble	—	—	—	1	—	1
Beads	—	2	1	3	2	8
Indeterminate	188	212	136	1107	156	1799
Total	2045	2621	1039	2761	1300	9766

Table 16.2. Distribution of Glass Artifacts by Functional Categories

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Indulgences	1142	1209	107	990	335	3783
Household/Mess	22	48	4	20	—	94
Architecture/Construction	653	1081	726	429	740	3629
Furniture	40	68	39	61	54	262
Communication	2	—	1	3	2	8
Hospital/Medical	—	—	—	142	6	148
Personal	—	2	7	4	3	16
Indeterminate	186	213	155	1112	160	1826
Total	2045	2621	1039	2761	1300	9766



Embossing of bottles is a technological hallmark that originated in 1867. Patent medicine bottles with embossed sides were also introduced at this time (Abbink 1987). Embossing is present on 173 fragments and represents 114 different manufacturers or styles (Figure 16.3). Identifiable fragments represent liquor/beer, condiment, patent/extract, soda, and perfume bottles. These marks are discussed in later paragraphs.

Figure 16.1. *Some of the whole and reconstructed bottles recovered from Fort Craig.*



Figure 16.2. *Finish styles.*



Figure 16.3. *Embossed bases and body pieces.*



Figure 16.3. (Continued) Embossed bases and body pieces.

When attribute information was lacking, general temporal information was derived from the color of the fragments. Prior to 1880, glass containers were manufactured largely of either natural glass, which ranged in color from light green to light brown, or very dark or "black" glass. After 1880, aqua and brown glass became the dominant colors in the manufacture of alcohol/beer bottles because of the added protection from light penetration (Ward et al. 1977:240).

Likewise, the food industry wanted glass containers that would make their products more attractive to consumers. As a result, glass manufacturers began to use such additives as manganese or selenium to bleach the light green tint out of natural glass (Yount 1967:7). Through time, as these "clear" containers were exposed to sunlight, they turned various shades of purple, amber, or a milky translucent white (Ward et al. 1977:240). Not until the 1920s and 1930s was clear glass that did not turn colors first manufactured. Commercial colors, such as red, blue, green, pink, and milk glass, were produced by adding certain metallic oxides to the glass. Because of expense, vessels of these colors were not manufactured in mass quantities until after the turn of the century (Ward et al. 1977:261).

The Fort Craig bottle assemblage is dominated by dark amber/brown, aqua, and light green fragments, which is consistent with nineteenth-century sites (Table 16.3). Only 139 fragments of the early, black glass were recovered. The majority of the pieces appear to represent post-1880 manufacture.

Those bottle fragments whose function could not be determined were placed in the indeterminate category (1,799 fragments). Most of the bottle fragments are from alcohol or beer bottles. Other types of bottles include patent/extract, prescription, condiment, perfume, and ink.

Alcohol/Beer

More than one-third of the recognizable bottle fragments (3,509, 36%) were classified as containers for alcoholic beverages, primarily beer. Twenty-six percent of these fragments are from wine or champagne bottles. The bottles in this category are predominantly brown and aqua, with some light green/aqua and black to dark olive green. These latter colors indicate wine or champagne bottles.

Fourteen of the finish/closure styles are from alcohol/beer bottles (Figure 16.2: 2, 4, 5, 8, 14, 15, 30, 32, 34, 35, 40, 46, 52, and 53). They have a ridge or a bulge below the rim that was designed to securely fasten the wire holding a cork stopper in place. This type of fastening apparently frustrated many a drinker

Table 16.3. Distribution of Bottle Glass Colors

	Date	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Clear	1880–1917	3	53	31	169	56	312
Amber/Brown	1880–1917	416	555	56	562	250	1839
Purple	1880–1917	87	55	13	109	6	270
Aqua	1880–1910	262	489	12	350	53	1166
Lt. Green	1870–?	59	182	69	521	74	905
Blue		15	1	2	24	8	50
Honey		17	1	—	8	—	26
Black	1815–1885	43	36	12	47	1	139
Olive Green		363	88	20	186	32	689
Blue/Green		—	5	24	48	9	86
Lt. Blue		—	1	—	1	1	3
Dk. Green		—	—	10	17	—	27
Med. Green		—	—	—	4	—	4
Gray/Flint		—	—	—	5	—	5
Dk. Blue/Green		—	—	—	21	—	21
Brown/Olive		—	—	—	84	2	86

as bottles are often found minus the neck/finish. In the bottle assemblage from Fort Union, hundreds of bottles were missing their necks; Wilson (1981:3) concludes that "in his eagerness to drink, the soldier often simply knocked off the bottle neck." One such bottle was recovered from the test trench in the room north of the bakery, and two finishes with intact cork and wire came from beneath the floor in Room 5 of the soldiers' quarters.

Embossing on these bottles is found primarily on the base and denotes the bottle manufacturer. Twenty-eight base fragments exhibit embossing (Figure 16.3: 1, 34, 39, 43, 46, 47, 55, 59, 61, 70, 73, 79, 83, 86, 89, 107, 108, 109, 110, and 115). These marks are described in Table 16.4. Of the 19 different marks, nine could be positively or tentatively identified as to manufacturer. The dates of the companies represent the duration of that company, not just the years when the base mark was used, although in many instances these dates are identical. Prior to 1873, beer was distributed only in barrels and kegs. That year, the process of pasteurization made the bottling of beer possible. The first company to apply the process was Anheuser, which began its bottling operation at that time (Herskovitz 1978). Five of the base marks—$^{c}C^{co}$, SB & G Co, FHGW, L.G. Co., and MG C^{o}—were Anheuser companies.

Three of the marks have discrepancies regarding their identification—FGHW, MG Co., and R & Co. The FHGW base mark is one of the most common marks recovered at Western posts (Herskovitz 1978; Wilson and Caperton 1977; Wilson 1981). Toulouse (1971:202) identifies this mark as that of the Frederick Hampson Glass Works of Lancastershire, England (circa 1880 to 1900). The predominance of this bottle suggests that it probably was of United States origin rather than an import from Europe. Jones (1968) believes it represents the F. Hitchins Company of Lockport, New York (1850/60 to 1872). The ending date for this company, however, predates the bottling of beer by one year. Thus, Wilson and Caperton (1977) postulate that this mark is probably that of an as yet unidentified Midwestern glasshouse, especially since it was an Anheuser Busch Company (Herskovitz 1978).

Table 16.4. Base Marks on Beer/Alcohol Bottles (compiled from Jones 1968; Toulouse 1971)

Base Mark	Quant.	Mold	Manufacturer	Dates	No. on Figure 16.3
A & DHC	1		Alexander & David H. Chambers, Pittsburgh	post 1843–1886+	43
A & D.H. Chambers Pittsburgh P^{a}	1				59
A. Arbogast & Co.	1		Alexander Arbogast, Pittsburgh	1861(?)–1908(?)	31, 89
B	1				61
$^{c}C^{co}$*	6	G	Carl Conrad Co., St. Louis	1876–1883	39
FHGW*	2	5, 6	Unknown		1
MG C^{o}*	2	11			34
+	3	8, 5, 11	Unknown		55
MG C^{o}*					
A	1	4			46
MG C^{o}*					
SB&G C^{o}*	1	5	Streator Bottle and Glass, Co., Streator, Illinois	1881–1905	47
R & CO	1	S	Ripley and Co.	1872–1892+	70
G CO	1				73
L.G. C^{o}*	1		Louisville Kentucky Glass Co.	1873–1886+	108
X	1				86
JN	1				79
C & I	1		Cunningham & Ihmsen, Pittsburgh	1865–1879	110
I.G. CO.	1		Illinois Glass Co., Alton, Ill. or Ihmsen Glass Co., Pittsburgh	1873–1929 ca. 1870–1895	115
12	1				
5	1				

* Manufactured for Anheuser Busch Company

Toulouse (1971) identifies the MG C° base mark as the Modes Glass Company of Cicero, Indiana, which was in existence from 1895 to 1904. These dates postdate not only the military occupation of Fort Craig but also most of the subsequent civilian occupation. Jones (1968), on the other hand, attributes this mark to the Missouri Glass Company of St. Louis, which existed continuously from 1859 to 1911. Wilson and Caperton (1977) do not agree with either Toulouse or Jones and suggest this mark belonged to either the Mississippi Glass Company of St. Louis or the Marsillon Glass Company of Ohio. Both companies appear in 1878 and 1881 advertisements in *Western Brewer*.

The R & CO. base mark is identified by Jones (1968:24) as representing Ripley and Company of Birmingham, Pennsylvania. Ripley and three other partners established a factory in 1866, but in 1872 Ripley left that factory to establish one of his own. This company was in business at least until 1892 as bottles bearing the R & Co. base mark with crown finishes have been found. Toulouse (1971:439) lists the mark as "Maker and User Unknown."

The company of Alexander and David H. Chambers of Pittsburgh (1843–1886+) was one of the major bottlers for the firm of Mayle and Gramm of Niagara Falls, New York. No other information regarding this company is available, but bottles bearing this base mark are present at other Western forts (Herskovitz 1978; Wilson 1981).

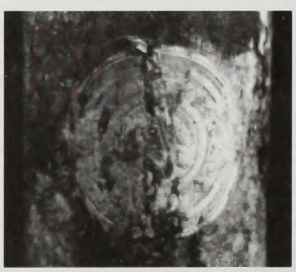
The two fragments of the base exhibiting the mark of the A. Arbogast and Company of Pittsburgh may represent the earliest bottle recovered. This black bottle probably held whiskey or brandy rather than beer. Amber bottles with this mark were recovered from Fort Union (Wilson 1981).

By far the most common brand of beer recovered was BUDWEISER, manufactured by the Carl Conrad Company. Thirty-seven fragments exhibit the embossed label of this beer (Figure 16.3: 26, 29, 33, 37, 38, 40, 42, 48, 49, 50, 54, 56, and 60). Originally the owner of a beer stube and restaurant in St. Louis, Carl Conrad returned to his home of Budweis, Germany, in the 1870s and learned how to make beer and how to pasteurize it in bottles. Upon returning to St. Louis, he contracted with the Anheuser Busch Brewing Associates to brew and bottle his beer, which he called Budweiser. The beer was bottled in his own bottles, embossed with °C°° on the bottom. In January of 1883, however, C. Conrad and Company went into bankruptcy. The Budweiser brand passed to Anheuser Busch, the major creditor (Toulouse 1971:117–118).

As previously mentioned, no whole beer/alcohol bottles were recovered, but three—two complete and one partial—were able to be reconstructed from pieces collected from the room north of the bakery, Room 5 of the soldiers' quarters, and Room 1 of the old hospital. The first complete bottle, recovered from the room north of the bakery, is aqua and measures 11.77 inches tall with a base diameter of 3.07 inches—a size known as "Quart Export Style." There are no maker's markings on either the side or the bottom, which suggests it may have had a paper label.

The second complete bottle came from Room 1 of the old hospital. It is brown and still exhibits remnants of the Anheuser Busch paper label (Figure 16.4). The base is embossed with °C°°. The size is the same as that of the aqua bottle.

The partial bottle from Room 5 of the soldiers' quarters is also brown but is missing most of the neck and the finish. The base is embossed with MG C°; its basal diameter mirrors that of the other two. This, too, probably had a paper label.



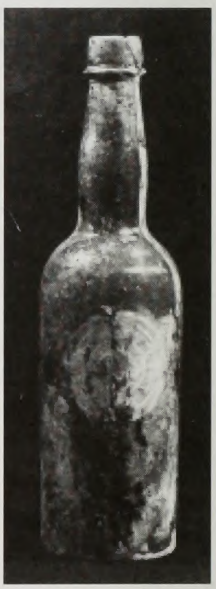


Figure 16.4. *Reconstructed Anheuser Busch bottle.*

Soda

Eleven fragments of soda bottles were identified. Six fragments of one soda bottle came from the roof/wallfall strata of Room 5 in the soldiers' quarters and the other five

were found in the trash dump east of the new hospital. The 12 oz. bottle from the soldiers' quarters is light green with a round bottom and is embossed with ROSS'S/ BELFAST (Figure 16.3: 66 and 67). Ross's Belfast was a ginger ale or aerated mineral water dating between 1875 and 1890. An 1877 ad for this product in Washington, D.C., priced it at $2.00 per dozen (Wilson 1981:30).

Patent-Extract

The nineteenth century was the heyday of patent medicines, nowhere more so than in the western frontier. At frontier military posts where pharmacies were unknown, post surgeons often not first rate, sanitation somewhat primitive, and food not always nutritious; the conditions were ripe for the contraction of numerous fevers and aches. Consequently, this often led to the consumption of patent medicines (Wilson 1981).

The excavations recovered 259 fragments of patent/extract bottles. Of these, 48 were finish fragments (Figure 16.2: 1, 6, 13, 15, 19, 20, 22, 25, 26, 29, 36, 37, 60, and 61). Style 13 was the most common style ($n = 17$) followed by style 26 ($n = 7$), and style 36 ($n = 6$). Twenty-three of the fragments exhibit embossing; the majority are from side panels (Figure 16.3: 25, 27, 28, 44, 45, 52, 57, 58, 62, 71, 78, 84, 90, 91, 94, 97, 100, 104, 105, 111, 112, and 113). Only one of the embossed fragments, style 25, could be positively identified as to manufacturer and/or contents. Tentative identification was made for marks 28 and 57. No information was found regarding the Bennett Company depicted in mark 27.

Mark 25 is from a bottle of MEXICAN MUSTANG LINIMENT manufactured by the Lyon Manufacturing Company of New York from 1865 to1890. An advertisement for this product in 1873 boasted the following (Wilson 1981:41):

> MEXICAN MUSTANG LINIMENT
> The enemy of disease! The foe of pain to man and beast is the grand old Mustang liniment, which has stood the test for 40 years. There is no sore it will not cure, no ache, no pain, that affects the human body or the body of a horse or other domestic animals, that does not yield to its magic touch. A bottle costing 25¢, or 50¢, or $, has often saved the life of a human being and restored to life. . . . (*New York Daily Tribune,* April 26, 1873)

Mark 57 may represent the AYER'S label. James Cook Ayer established a drug and medicine company in 1841 in Lowell, Massachusetts. This company produced such products as Cherry Pectoral, Cathartic Pills, Sarsaparilla, Ague Cure, and Hair Vigor. James Ayer died in 1878 and was succeeded by Frederick Ayer, who operated the business until early in the twentieth century. By 1937, the Ayer Company was worldwide, but in 1938 the company was acquired by Sterling Products Inc. (Fike 1987:94).

Mark 28 appears to be from a Kickapoo bottle. The Kickapoo Indian Medicine Company was established in New Haven, Connecticut, in 1881 by John Healy and Charles Bigelow. It made a variety of products including liver and kidney renovator, cough syrup, and hair tonic. The primary outlet for the distribution of the tonics was the traveling medicine show. In 1894, Healy sold his interests to Bigelow (Fike 1987:166).

It is not known how effective such products were, but the alcohol content alone probably produced a temporary easing of any ache or stomach trouble! What is known, however, is that the archeological record from other Western posts has shown that products such as these were quite plentiful (Hardesty 1978; Herskovitz 1978; Wilson and Caperton 1977; Wilson 1981).

Also placed within this category was the whole bottle recovered from Room 2 of the officers' quarters. It appears to be a tonic bottle (Figure 16.5). This bottle is rectangular



Figure 16.5. *Tonic bottle from Room 2 of the officers' quarters.*

and measures 6 13/16 inches high by 2 3/8 inches wide. A cork stopper is still in place. The blue color and closure style are consistent with patent/extract bottles.

The base of this bottle is embossed with M^C^C (Figure 16.3: 75), which Toulouse (1971) identifies as the William McCully & Company, Pittsburgh, 1832 to circa 1886. This base mark was also found at Fort Union, but on round bottles (Wilson 1981).

Medicine

Items placed in this category consist of 139 pieces of hospital bottles, two fragments of a castor oil bottle, and a whole pill bottle. The hospital and castor oil bottle fragments came from the excavations at the front gate and in the new and old hospitals, and the pill bottle was recovered in Room 6 of the soldiers' quarters.

The pill bottle is of clear glass and has a height of 2 3/16 inches and a base diameter of 3/8 inch. The cork is still in place, and remnants of a paper label reading "CARTER'S LITTLE LIVER PILLS" are still attached (Figure 16.6).

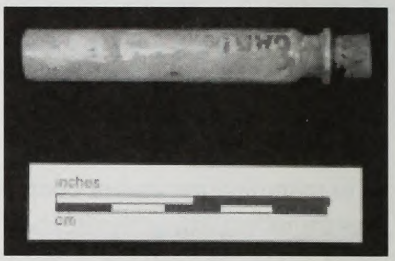


Figure 16.6.
Pill bottle recovered from Room 6 of the soldiers' quarters.

John S. Carter of Erie, Pennsylvania, perfected Carter's Little Liver Pills in the 1880s and established the Carter Medicine Company. In the 1890s, he sold the company to a New York syndicate (Fike 1987).

The hospital bottles are brown/olive and gray/flint. Embossing is present on nine fragments and represents two different companies. Five of the fragments are from U.S.A. Hospital bottles (Figure 16.3: 16, 24, 64, 80, and 87). The complete label was U.S.A./HOSP. DEPT. within a raised oval outline. These bottles were manufactured in Pittsburgh from the laboratory's own mold and date from about 1863 to 1890 (Herskovitz 1978; Wilson and Caperton 1977; Wilson 1981).

The other four fragments (Figure 16.3: 81, 93, and 96) represent the Pike and Kellogg Company of St. Louis, Missouri. This company began in either 1860 or 1863; its end date is not known (Jones 1968). Bottles bearing this mark would have read U.S.A./MEDICAL SUPPLIES/PIKE & KELLOGG/ST. LOUIS.

The two fragments of a castor oil bottle came from the new hospital. They are light green and bear remnants of a paper label reading only Castor Oil. The manufacturer is unknown.

Condiment

Most of the 89 fragments placed in this category were done so on the basis of 10 finish fragments (Figure 16.2: 19, 22, 24, 28, 29, 38, 39, 44, 51, and 58) and comparable body pieces. These fragments represent such items as mustard, ketchup, pickles, and sauces.

Eight of the body fragments exhibit partial embossing (Figure 16.3: 17, 18, 20, 21, 22, 23, and 70). These are all fragments of Lea and Perrin's Worcestershire bottles. These bottles probably are of English import dating prior to 1880, as Lea and Perrin's bottles manufactured in the United States are embossed E.F. DIXIE CO. up the side instead of LEA & PERRIN'S. This product was first imported to the United States around 1840 (Switzer 1974:79). An 1861 advertisement in *Harpers Weekly* reads:

> LEA & PERRIN'S WORCESTERSHIRE SAUCE
> Citizens called from their homes on public duty and deprived of many personal comforts, need not be deprived of Lea & Perrin's Worcestershire Sauce, as the use of this esteemed condiment will go far to remedy the discomforts arising from bad or irregular cooking. For sale in half-pint, pint, and quart bottles, by all respectable grocers, throughout the United States. John Duncan & Sons, Union Square and 14th Street, Sole Agents (Wilson 1981).

In addition to the Lea and Perrin's bottle fragments, one stopper was also embossed with the company name. This item is discussed under the section on stoppers.

Given the monotony of basic army cooking, Lea & Perrin's Worcestershire Sauce was probably a welcome flavoring. This product would have had to be purchased from the post sutler as it was not standard commissary issue.

A partial mustard jar was also recovered from the trash dump east of the hospital. This jar is clear and barrel-shaped (Figure 16.7). It is 4⅞ inches high and has a 2-inch basal diameter. The lip is rolled over. Embossing on the front of the jar says MOUT . . ./LOUIT FRERES & . . . (Figure 16.3: 88), which suggests a French import. Similar barrel-shaped mustard jars were found at Fort Union but represented other brands (Wilson 1981).



Figure 16.7. *Reconstructed mustard jar.*

Perfume/Toiletries

Two pieces of a possible toilet water or perfume bottle came from Rooms 1 and 3 of the officers' quarters, and a whole perfume bottle was found in Room 2 of the old hospital (Figure 16.8). Both of the fragments are purple and exhibit a thinner body wall than the other bottle body pieces.

The whole bottle is also purple and is 3 inches high with a basal diameter of 1½ inches. The base does not have a manufacturer's mark, but the body is embossed with LUBIN/PARFUMEUR/PARIS (Figure 16.3: 114). Perfume bottles exhibiting this brand name were found at Forts Union and Laramie (Wilson 1981).



Figure 16.8. *Perfume bottle.*

Ink

A whole clear inkbottle came from below the floor in Room 3 of the officers' quarters (Figure 16.9). This bottle is square and measures 2 11/16 inches high by 1 9/16 inches wide at its base. The flared finish has a 1 3/16 inch diameter, while the opening is 1 inch wide. The lack of grinding on the interior suggests this bottle had a cork stopper. No maker's mark is present on the base.



Figure 16.9. *Inkbottle.*

Indeterminate

Bottle fragments whose contents could not be determined were placed into a single category. Of the 1,799 indeterminate fragments, the majority are small, plain body sherds from bottles whose contents or function could not be ascertained. These fragments came in many different colors, but the majority are light green (773 fragments, 43%) followed by clear (284 fragments, 15.8%), purple (233 fragments, 13%), and aqua (228 fragments, 12.7%).

Twenty-three of the fragments are finishes (Figure 16.2: 6, 7, 10, 18, 21, 23, 25, 27, 31, 37, 38, 39, 42, 43, 45, 47, 48, 54, 55, and 59). Four partial finish pieces were also recovered.

The embossing on 11 fragments was too fragmentary to ascertain manufacturer or contents (Figure 16.3: 2, 6, 12, 23, 32, 36, 41, 53, 63, 72, and 77). One base mark of note (Figure 16.3: 53) represents a registered British trademark dating between 1842 and 1883 (Kovel 1986). The base is roughly 2 inches square and is light green. The exact contents are not known, but the style, size, and color of the base suggests it might have been an oil or some type of condiment/sauce bottle.

OTHER GLASS ARTIFACTS

Window Glass

Window glass fragments constitute the second largest number of glass artifacts recovered with 3629 pieces. They came from all the excavated areas. Figure 16.10 depicts histograms of window glass thickness by provenience. The mean thickness for all the areas except the officers' quarters is 0.08 inches. The window glass from the officers' quarters is slightly thinner, with a mean thickness of 0.07 inches. These thicknesses are typical of a mid- to late-nineteenth-century historical site (Chance and Chance 1976).

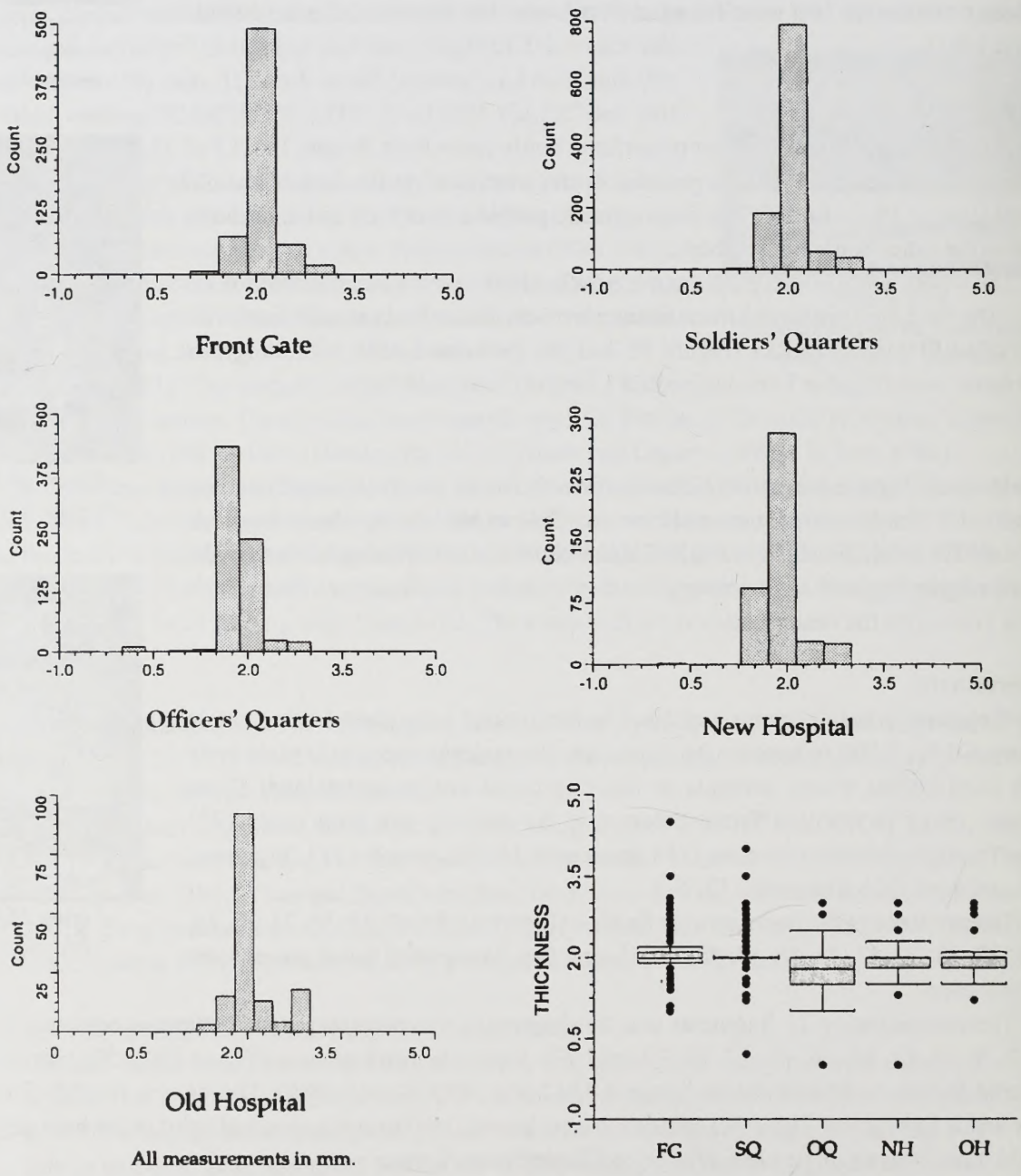


Figure 16.10. Thickness of window glass from the five study areas.

Lampshade Crystal

An octagonal lampshade crystal was found in the new hospital (Figure 16.11). It is clear and measures 11/16 inches long by 5/8 inches wide. The obverse is a faceted pyramid and the reverse has beveled edges. Two small, 2-mm-diameter holes are at the top and bottom of the crystal. These holes would have been used to attach the crystal to the shade at the top and a second, possibly teardrop-shaped crystal at the bottom.

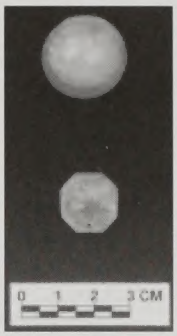


Figure 16.11. Lamp crystal and marble.

Marble

A translucent marble referred to as a mica was found in the new hospital (Figure 16.11). It is clear with a slight purple tint and has crushed mica swirl patterns. The marble measures 2 cm in diameter. Marbles of this style were imported from Germany between ca. 1877 and ca. 1914 (Randall 1971).

Tubes

Five fragments of glass tubes were recovered (Figure 16.12), ranging between 2.4 and 6.8 cm in length and from 0.4 to 0.7 cm in diameter. The rounded bulge on one end of one of the fragments suggests it may have been part of an eyedropper. A second piece has a tapered end with a tiny hole (<1 mm) in the center and a solid rod attached near the tapered end. The function of this piece is unknown.

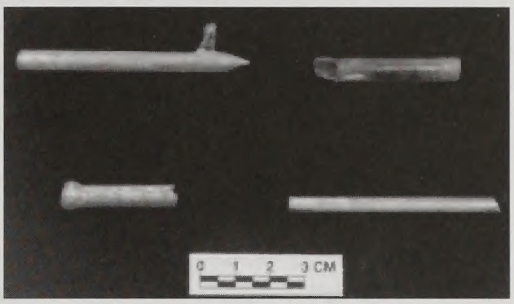


Figure 16.12. Glass tubes.

Beaker/Prescription Glass

Two fragments of a possible beaker or prescription glass were found in the old hospital. Small lines and the numbers 3 and 4 are etched on the fragments.

Slide

Two partial microscope slides were recovered from the new hospital. They are 1 inch wide and have lengths of 3 and 3¼ inches. Pieces are broken off the ends of both but the rectangular shape is clearly evident (Figure 16.13).

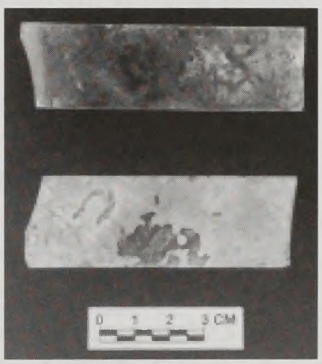


Figure 16.13. Microscope slides.

Stoppers

In addition to the Lea and Perrin's stopper, six other stoppers were recovered (Figure 16.14). The stoppers are described in Table 16.5.

Club sauce stoppers were used for small-mouthed commercial bottles. They have a horizontally oriented, circular finial and a predominantly cylindrical shank with a tapered end. The finial may have a depression in the center, sometimes with lettering, it may be flat without a depression, or it may be domed. The shank normally had cork wrapped around it (Jones and Sullivan 1985).

On flat, oblong head stoppers the finial is flat, rectangular, and vertically oriented. It may broaden slightly toward the shank or narrow to form a neck. This style of stopper figures prominently in glassware used in dispensaries, medicine chests, and by druggists (Jones and Sullivan 1985).



Figure 16.14. Stoppers: (a) club sauce, (b) flat, oblong head, (c) hollow, (d) ball.

Table 16.5. Glass Stoppers

Type	Color	Length	Diameter	Shank	Comments
Club sauce	Lt. green	1¼	½	Plain	Embossed with Lea & Perrin's
Club sauce	Aqua	1⅜	⅝	Plain	Domed finial
Flat head	Clear	2	¾	Ground	Pontil mark on shank tip
Flat head	Clear	1¼	⅞	Ground	No pontil mark on shank end
Flat head	Clear	1⅜	7/16	Ground	Pontil mark on shank end
Ball	Clear	1¼	7/16	Ground	Pontil mark on shank end
Hollow	Clear				Flared and ribbed finial, shank broken

All measurements in inches.

Ball stoppers have a spherical finial that is joined to the shank by a narrower neck. This style of stopper was used on commercial containers, decanters, and display bottles (Jones and Sullivan 1985).

The hollow stopper may have a hollow shank and finial or a hollow finial and solid shank, depending upon the function. These stoppers were used on a variety of vessels, including chemical jars and display bottles (Jones and Sullivan 1985).

Lamp Chimney

The majority of the 261 fragments of lamp glass are body pieces. Four of the fragments are rim shards, two of which have a flared, scalloped edge. The remaining two are also flared but have a plain edge. The fragments consist of transparent glass ranging in thickness from 0.01 to 0.059 inches with a mean of 0.042 inches. The pieces are too small to ascertain the overall shape or style of the chimney, but many likely came from a "student lamp" (Pyne Press 1972). The army first issued these kerosene lamps in 1882 (Figure 16.15).

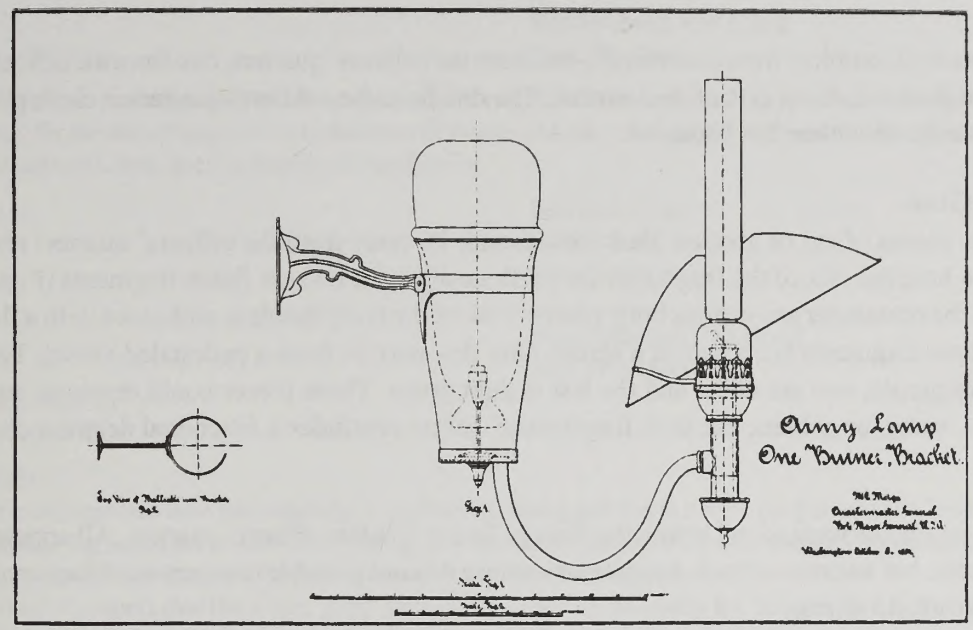
Insulator

Seven fragments of insulators were recovered—two from the front gate, three from the new hospital, and two from the old hospital (Figure 16.16). These fragments are aqua and have thicknesses ranging from 0.676 to 0.725 inches. All of the fragments exhibit threads on the inside, which postdate 1875. No maker's marks are present.

Insulators made their appearance in the early 1840s after the granting of the telegraph patent to Samuel Morse in 1840. These early insulators were hollow in order to fit over the wooden pegs on the poles. Although they were secured by wire tied around a groove in the glass, these insulators were difficult to keep on the pole. In 1865, Louis A. Cauvet invented an insulator with interior threads. The threads matched similar threads on the wooden peg. Six years later, Robert Hemingray began turning out insulators made in two steps: first the body was poured and then the threads were molded. An improved Hemingray insulator is still being manufactured (Munsey 1970).

Fort Craig received orders to install a military telegraph line in 1875. Remnants of the poles are still found near the front gate. A small item in the *Weekly New Mexican* dated December 21, 1875 (p. 1, col. 3), reads as follows:

> Lieut. Reade has furnished us with the following list of settlements through which the new military telegraph will pass: . . . Fort Conrad (ab'd), Beckwith Ranch, Fort Craig (military post), Paraje, Fort McRae (military post), ...
>
> Operating stations will be located at Santa Fe, Albuquerque, Los Lunas, Socorro, Fort Craig, Fort McRae, Aleman (Martin's Well), Fort Selden, Las Cruces, Mesilla, Fort Cummings, Fort Bayard, Silver City.
>
> Testing stations will be established at Fort Cummings, Las Cruces, Martin's Well, Fort Craig, Los Lunas, Algodones.



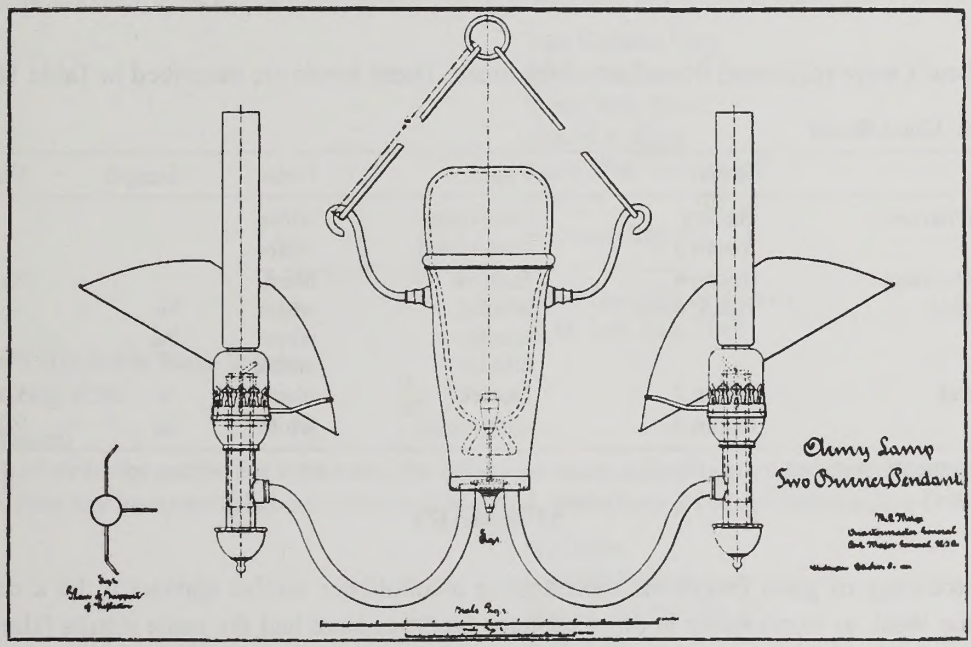




Figure 16.15.
Army-issue "student lamp" (U.S. War Department 1881b: facing p. 438).

Figure 16.16. *Insulators.*

Tumbler

Three fragments of tumblers were recovered—one from the soldiers' quarters, one from the officers' quarters, and one from the trash dump east of the hospital. The one from the soldiers' quarters is clear, pressed glass. The other two are also clear but plain.

Decorative Glass

Twenty-three pieces of cut or pressed glass were found; 18 came from the officers' quarters and five were from the new hospital. Six of the fragments are portions of bases, two are finish fragments (Figure 16.2: 49 and 55), and the remainder are various body pieces. One of the body shards is embossed with a floral design. Two of the base fragments are a part of a square base that may be from a pedestaled vessel. Twenty of the fragments are purple, two are clear, and the last is light green. These pieces could represent such items as candy dishes, vases, or goblets, but their fragmentary nature precludes a functional determination.

Mirror

Four mirror fragments were found below the floor of Room 3 in the officers' quarters. All appear to be from the same mirror, but because of their fragmentary nature it is not possible to ascertain if they are from a wall mirror or a handheld mirror.

Beads

Eight glass beads were recovered from four of the areas. These beads are described in Table 16.6.

Table 16.6. Glass Beads

Location	Room	Type	Color	Length	Diameter
Soldiers' Quarters	Bakery	wire-round	white		
	Room 1	wire-round	white		
Officers' Quarters	Room 4	faceted	black		3/16
New Hospital	Black ward	tubular	white	3/16	
		tubular	white	3/16	
		tubular	amber	1/4	
Old Hospital	Room 2	faceted	black	1/4	1/4 (widest)
	Room 7	wire-round	white	3/32	1/4 (widest)

All measurements in inches.

SUMMARY

The high percentage of glass fragments representing alcohol/beer bottles appears to be a common trait throughout the West, as excavations at other military facilities have had the same results (Hardesty 1978; Herskovitz 1978; Staski 1990; J. Wilson 1967; Wilson and Caperton 1977). A favorite pastime of many soldiers was consuming large amounts of whiskey and beer. Until the summer of 1865, the army issued a whiskey ration to the men. After this practice was suspended, liquor could still be obtained from the sutler or post trader and, later, beer and light wines from the post canteen as long as these sales did not interfere with the performance of duties (Giese 1969; Rickey 1963). These items were sold either by the drink or by the bottle, with beer ranging in price from fifty cents to one dollar a quart (Giese 1969).

Commanding officers did try to control the drinking both on and off the post if it interfered with military operations. At the same time the whiskey ration was cut, the nationwide temperance movement began to gather momentum. To encourage temperance, commanding officers often limited the amount of liquor that sutlers and post traders could sell to enlisted men (Rickey 1963). The following letters from Fort Craig provide a glimpse of some of the methods used to control drinking at the post and the sale of liquors outside the post.[1]

Headquarters Fort Craig
Nov. 20, 1863

Endorsement made this day on letter of John S. May of Las Cruces requesting permission to open an agency for the sale of Lager Beer in the town of Paraje NM and returned to him by mail. "No objection to the sale of Lager Beer in Paraje, but no liquors."

Edwin A. Rigg
Col 1st Inf CV
Commanding

Head Quarters Fort Craig
July 17th 1865

French Wm. H.
1st Vet. Inf. C.V.

Captain:
Your team reported here this morning. I understand that it arrived at Paraja [*sic*] at an early hour on yesterday, but found the town so interesting, that the Sergt in charge laid over losing all of his papers. He *says* that he was sent here for flour. I have directed that the wagon be loaded with 2500 lbs. and sent off today. I suspect that the whole party were drunk. I see no necessity for detachments stopping in that town, the camp at the ferry is a better place. Please in the future direct your teams to make that point.

I am Captain Very
Respectfully
Your Obdt. Servt.
Edwin A. Rigg
Lieut. Col. 1st Vet. Inf.
C.V.
Commanding

Head Quarters Fort Craig
N.M. July 24th 1865

Messr's Hinckly & Blake Sutlers
Fort Craig, N.M.

Gentlemen:
Your [*sic*] are hereby notified that in the future you will not sell to any enlisted man, or *Government Employee* at this Post, any intoxicating liquors or bitters of any kind, unless by order of the Commanding Officer.

By Order
Richard Hudson
2nd Lt. 1st Vet. Inf. CV
Post Adjt.

P.S. Please put this in a conspicuous place.

Hd. Qrs. Fort Craig N.M.
August 17th 1865

To Company Commanders at Post

By direction of the Col. Commanding, I have the honor to inform you that the Cmdg. Officer for the present will not sign any more orders for *whiskey* on the Sutler & you will send no such orders to him for approval.

Respectfully
Your Obdt. Servt.
Richard Hudson
2nd Lt. 1st Vet. Inf. CV
Post Adjt.

In spite of restrictions, alcoholism was a major problem for the army. In 1881, President Rutherford B. Hayes abolished the sale of whiskey at military posts, but this order took a while to implement (Giese 1969). During the decade of the 1880s, about forty-one of every thousand men were hospitalized as alcoholics (U.S. Department of War 1891[I]:593).

Many a court-martial was convened to deal with soldiers caught drunk on duty. Of the 114 garrison court-martials held at Fort Laramie in 1876, 60% dealt with offenses related to drinking (Lavender 1983). Punishments for drunkenness depended to some extent on the seriousness of the case, and to a large extent on the officers of the post or court-martial imposing them. These included fines, short guardhouse stays, reduction in rank, or if chronic, "bobtail" discharges. In this latter punishment the character section was clipped from the discharge papers, which indicated that the recipient had not been honorably released from the service (Rickey 1963).

By far the worst cases occurred around payday and during holidays, especially at Christmas. During such holidays as the Fourth of July, Christmas, and New Year's Day, many commanders called off fatigue duties and drill. Special dinners and celebrations often marked these holidays, and it was not uncommon for soldiers to top off the day's celebration with excessive drinking (Wooster 1987). One observer later wrote in a diary that "During the Christmas holidays drunkenness was prevalent and desertions were numerous" (Fisher 1963:122). At Fort Craig, the number of enlisted men under arrest or confinement during the month of December exceeds those of the other months (Table 16.7).

The majority of bottle fragments in this assemblage appear to date to the late 1870s/early 1880s. This suggests that the railroad probably played a significant role in the shipping of these goods to the area. Only 2.5% of the bottle glass is of the early, "black" glass, which more than likely predates the railroad. Many of the patent/extract and condiment bottles were presumably freighted in by the sutler and also could easily predate the railroad. These bottles constitute about 6% of the bottles recovered. The continuous-thread closure postdates the military occupation of the fort.

The preponderance of beer bottles recovered from the soldiers' quarters (over 85%) as opposed to finer wines and liquors clearly attests to the lower economic status of the enlisted men. The presence of most of the glass fragments in the roof/wall fall strata indicate that one (surreptitious) method of cleaning the area may have been to throw the item onto the roof. This would account for the high number of bottle fragments in this stratum and the lack of a stratified assemblage within these quarters.

The small number of alcohol bottles found in the officers' quarters is surprising. This may be a reflection of the cleanliness of the officers' wives and not an indication that the occupants of these quarters did not drink very much.

The dearth of hospital-related bottles in the assemblage, especially given the excavations in the trash dump behind the hospital, is equally puzzling. Many of the indeterminate fragments recovered from this area may be from these bottles, or perhaps the hospital personnel dumped the bottles elsewhere.

The high percentage of personal items recovered from the officers' quarters, including those in the old hospital, clearly reflects the higher status of the officers. No personal items within this material group were recovered from the enlisted men's quarters. Interestingly, most of the personal items are suggestive of a woman's influence within the quarters—cut and pressed glass fragments and perfume/toilet water. ✠

NOTE

1. U.S. War Department, Record Group 92, Letters Sent, National Archives Record Service: LS 100 bottom, LS 116 middle, LS 178 middle.

Table 16.7. Number of Enlisted Men in Arrest or Confinement (A/C) and Number of Desertions

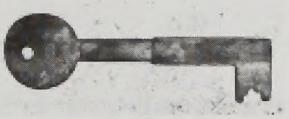
	Jan		Feb		Mar		April		May		June		July		Aug		Sept		Oct		Nov		Dec	
	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des	A/C	Des
1854	XX		XX		5	1	7	2	3	4	8	5	6	—	7	—	5	—	5	5	11	—	11	—
1855	10	3	8	1	10	2	11	—	8	—	7	1	7	1	9	—	5	2	7	—	5	—	7	—
1856	7	—	7	1	4	—	8	—	8	—	5	—	9	—	5	1	8	—	9	3	8	4	10	—
1857	14	6	6	—	8	—	10	—	13	—	9	1	18	—	11	—	8	—	7	3	5	—	7	—
1858	14	6	6	—	8	—	10	—	13	—	9	1	18	—	11	—	8	—	7	3	5	—	7	—
1859	5	—	16	—	4	—	6	—	4	—	6	4	1	1	4	—	8	—	6	—	6	1	11	2
1860	15	3	4	—	7	1	3	1	1	—	3	—	1	—	2	—	1	—	2	—	12	—	23	2
1861	22	1	10	4	15	3	8	—	3	2	3	—	—	—	17	1	8	1	6	2	7	1	25	1
1862	NR		13	10	19	6	11	—	4	—	6	1	7	—	NR		9	—	2	—	10	1	29	—
1863	19	—	28	1	36	—	29	—	25	—	19	—	4	1	10	1	11	—	9	—	15	—	20	—
1864	22	—	1	12	30	4	33	3	31	—	26	1	10	5	1	—	21	—	13	—	16	5	18	—
1865	24	1	19	—	7	—	18	—	2	—	3	—	14	—	17	1	14	—	19	—	19	1	12	—
1866	5	—	9	—	8	3	5	3	5	—	18	—	18	1	13	—	—	—	6	—	2	2	5	1
1867	NR		NR		NR		NR		NR		NR		NR		NR		NR		7	1	5	5	9	2
1868	9	4	12	2	14	2	14	—	7	—	4	—	5	6	1	1	12	1	25	1	29	3	31	1
1869	26	1	9	—	16	3	14	1	13	—	20	—	20	—	24	1	21	—	1	1	8	1	13	1
1870	9	1	4	1	5	—	5	—	9	11	6	3	9	2	7	1	10	3	8	—	10	2	8	—
1871	7	3	13	—	5	—	8	1	5	1	2	—	3	1	1	—	1	—	4	—	10	3	12	—
1872	7	2	11	—	9	7	5	1	4	1	6	—	3	1	3	1	5	2	5	2	13	—	10	3
1873	6	—	7	1	10	—	9	5	7	5	2	2	9	1	2	1	5	—	6	1	1	1	3	—
1874	4	—	3	—	3	—	8	1	11	2	6	—	6	—	2	1	10	—	7	—	5	—	12	1
1875	9	—	6	—	3	—	4	—	6	—	6	2	9	—	4	—	4	—	4	—	5	—	6	2
1876	4	—	4	—	5	—	4	—	6	—	—	—	3	—	—	—	7	—	11	—	8	—	7	—
1877	6	—	7	1	—	—	1	2	3	1	—	—	4	—	4	—	3	—	5	—	1	—	3	—
1878	4	—	8	—	5	—	3	1	8	1	7	—	4	—	5	—	NR		NR		—	—	—	—
1879	—	—	—	—	NR		—	—	XX		XX		XX		XX		XX		XX		XX		XX	
1880	XX		XX		XX		XX		XX		XX		—	—	—	—	—	—	4	—	7	1	9	—
1881	7	1	8	—	3	—	10	1	6	4	7	1	5	1	7	1	4	1	3	2	7	2	10	—
1882	9	9	4	3	5	19	4	4	8	23	5	1	2	4	3	2	5	4	7	—	1	1	3	2
1883	2	1	3	4	3	4	4	—	9	2	4	—	4	1	3	25	4	3	16	6	7	3	12	2
1884	16	3	9	3	12	17	13	3	4	6	11	1	2	—	1	—	3	—	—	—	1	—	—	—
1885	—	—	—	—	—	—	—	—	—	—	—	—	XX		XX		XX		XX		XX		XX	
Total	281	41	229	45	259	72	259	30	219	64	204	25	184	26	166	39	198	20	208	27	250	37	336	20

NR = Return missing or not filed; XX = Fort Craig closed

Chapter 17

METAL ARTIFACTS

Peggy A. Gerow, Charles Haecker, & Harding Polk II



METAL ARTIFACTS (n = 2,783) CONSTITUTE the second largest artifact assemblage recovered during the excavations. These artifacts crosscut eleven functional categories: architecture-construction, household-mess, furniture, clothing, transportation, stockraising-subsistence, communication, military, personal, indulgences, and indeterminate. Specialty items such as ammunition and buttons are discussed in separate chapters.

The following attributes were recorded: type, material, condition (e.g., whole, fragment), and functional group. Complete measurements were taken when the measurement was intrinsic to functional and/or temporal determinations (i.e., nail size or pennyweight, can diameter and height).

The most common material types in this assemblage are tin and iron. Minor amounts of copper, brass, and an unknown metal alloy are also present. As is usually the case with excavated metal, the state of preservation ranges from excellent to extremely poor. In most cases the degree of deterioration hampered any detailed study. The results of the analysis are reported below by functional category. The distribution of metal artifacts by functional groups is presented in Table 17.1.

ARCHITECTURE/CONSTRUCTION

Roughly 50% of the metal artifacts were assigned to the architecture/construction functional group. This category is composed of tools, hardware, and materials used in the fabrication and upkeep of structures. The diversity of articles in this category is indicative of varied curation practices as well as loss probabilities. Schiffer (1987:90–96) has suggested that loss probability varies directly with portability or transportability and inversely with an object's mass. Small, easily carried items can be expected to have a higher loss probability, but that probability decreases as size and weight increases.

Loss probability is also affected by the monetary value and availability of the item in the market. This suggests an expendability factor whereby discard and loss rates are influenced to a degree by how valuable an item is and under what conditions it might be given up for loss.

Seaman (n.d.) notes in his discussion of a homestead dugout site near Tucumcari, New Mexico, that small hardware such as nails are subject to high loss or discard rates during periods of construction. This results in part both from their greater expendability and from their greater availability (quantity) in the

Table 17.1. Distribution of Metal Artifacts by Functional Category

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Architecture/Construction	154	230	384	351	267	1386
Household/Mess	26	100	299	104	42	571
Stockraising/Subsistence	2	—	11	4	—	17
Furniture	1	1	15	8	29	54
Clothing	2	30	49	8	11	100
Personal	1	3	26	—	4	34
Military	2	9	35	5	2	53
Transportation	1	2	21	5	4	33
Communication	—	—	2	1	2	5
Indulgences	—	—	2	1	1	4
Indeterminate	358	25	49	53	41	526
Total	547	400	893	540	403	2783

system. Through destruction, deterioration, scavenging, or even a subsequent occupation, all materials comprising the structure could enter the archeological record.

Nails

From their number alone, the most significant of the datable artifacts are nails. A total of 1,189 nails, both whole and fragments, were recovered.

Nail form is diagnostic and it reflects the technological transitions from hand-wrought to machine-cut to wire nails. The perfected machine-made, head-cut nail found in the Fort Craig assemblage was first manufactured in the 1830s and is indistinguishable from those made today. American wire nail machinery was perfected during the 1860s and 1870s, and wire nails replaced cut nails very gradually. The lower cost and ease of handling made wire nails more acceptable (Nelson 1968).

Common cut nails were sold in sizes from 2d to 60d, and their uses varied according to size: 6d to 8d for light framing; 16d and up for heavy framing, rafters, and studding for partitions; and 60d for securing planks to wooden bridges (Fontana and Greenleaf 1962:57). Cut finishing nails, sizes 6d to 10d, were used for all finishing work, particularly on the inside of a building; the head was designed to be countersunk and concealed (Fontana et al. 1962:57). Shingling nails were made only in sizes 3d and 4d.

Most of the nails (96.6%) are machine-cut square nails ($n = 1,149$) followed by hand-wrought ($n = 38$) and wire ($n = 2$). The wire nails probably represent the last few years of military occupation or the post-military civilian occupation of the fort. Almost one-third (30.8%) of the total assemblage was identifiable as to size or pennyweight (Table 17.2). Nail fragments are assumed to be the result of structure dismantling; the recovery of relatively few whole nails may be due to salvaging after the fort was abandoned (Figure 17.1).

Brads

Six brad-like tacks were found in the front gate excavations. They range from ½ to ¾ inches long and are made of wire. These items may be from the civilian occupation of the fort.

Screws

Fourteen flat-head wood screws and two eye screws came from the excavations, the majority from the officers' quarters ($n = 9$). The wood screws are of various lengths, ranging from ⅝ to 1½ inch long. The eye screws measure 1 and 1½ inch long with head diameters of ½ and ⅞ inch, respectively.

Table 17.2. Distribution of Identifiable Nail Sizes

	2d	3d	4d	5d	6d	7d	8d	9d	10d	12d	16d	20d	30d	36d	40d	50d	60d	Total
Front Gate	1	—	6	5	4	—	3	—	4	1	1	—	—	—	—	—	—	25
Soldiers' Quarters	1	—	12	—	—	—	7	—	3	1	1	—	1	—	—	—	—	26
Officers' Quarters	4	6	22	3	15	6	8	10	6	1	3	—	—	4	3	1	—	92
New Hospital	—	1	10	10	10	3	27	8	19	13	18	3	—	—	—	—	—	122
Old Hospital	2	4	33	2	14	—	23	5	5	4	4	4	—	—	1	—	1	102
Total	8	11	83	20	43	9	68	23	37	20	27	7	1	4	4	1	1	367



Figure 17.1. *Various sizes of machine-cut nails recovered from Fort Craig.*

Lead Anchor

A lead anchor for securing a screw to a wall came from the officers' quarters. It measures 1 inch long and had been used.

Bolts and Nuts

Seventeen bolts were recovered—12 from the officers' quarters, three from the new hospital, and two from the soldiers' quarters. Sizes range from 1¼ to 9 inches long and ⅜ to ¾ inch in diameter. The two recovered from the soldiers' quarters were bolt heads that had been cold chiseled from the shaft, suggesting removal of a large, bolted-down object.

Four square nuts came from the officers' quarters ($n = 3$) and the new hospital ($n = 1$). Three of them measure ½ inch square and the fourth is 1½ inch square.

Builder's Hardware

The 22 artifacts placed in this category consist of hinges, hinge pins, and a door lock. All are made of iron and are in various states of decomposition.

Three fragments of one strap hinge were recovered from the front gate area. The fragments are made of hand-forged iron and are ¼ inch thick.

Within the officers' quarters, the hardware found consists of four fragments of square hinges, two pieces of strap hinges, one double door hinge, and one rim lock. The double door hinge measures 5 inches long by 3 inches wide and has five screw holes per side. The rim lock, recovered from Stratum 2 in Room 5, measures 8 inches long, 5¼ inches wide, and 1½ inch thick. It has an inset keyhole in the center.

Eleven pieces of builder's hardware were recovered from the new hospital. These items consist of eight hinge pins and three fragments of a double door hinge. Four of the hinge pins are whole and range in length from 2½ inches to 4¼ inches and in diameter from ⅜ to ¾ inch. The other fragments are between ⅜ and ½ inch in diameter.

Braces

Two hand-forged iron braces were recovered from the new hospital excavations. One is a bar fragment measuring 2¼ inches wide by ⅜ inch thick. A nail or screw hole is on one end. The second brace is an L-shaped piece measuring 2 inches by 1 inch by ⅛ inch thick. Holes are present on each end.

Strapping

Seventy fragments of strapping were found, the majority from the front gate (n = 30) and the officers' quarters (n = 23). The remaining 17 were recovered from the new hospital (n = 9) and the old hospital (n = 8). Made from tin and iron and of various sizes, many have holes punched in them suggesting use as bracing materials or barrel hoops.

Washers

Five washers were recovered—four from the officers' quarters and one from the old hospital. Made of copper, tin, and iron, they have diameters ranging from ⅜ inch to 3 inches with center hole diameters between 9/16 and 1⅛ inch.

Pipe

The excavations in the soldiers' and officers' quarters yielded three fragments of pipe. These pieces are made of copper, lead, and iron and have diameters of ¾, 1, and 1 3/16 inch, respectively. The specific uses of these pipes are not known.

Roofing Materials

Thirty-eight fragments of roofing material came from the officers' quarters and Room 1 of the old hospital, 17 pieces of corrugated tin and 21 fragments of zinc plating. Three tin discs and one zinc disc with center nail holes were also recovered. These discs were probably used to secure the roofing materials to the support beams. The presence of these materials suggests that the jaspe roofs of portions, if not all, of these buildings were replaced with metal roofs.

Padlock

The lower half of a padlock was found below the floor in Room 1 of the officers' quarters. This fragment measures 2¼ inches high, 2¾ inches wide, and 2 inches thick.

Axe

A badly corroded axe head fragment also came from below the floor in Room 1 of the officers' quarters. It appears to be hand-forged and measures 3¼ inches at its widest point.

A second axe head was found under the floor in the white ward of the new hospital. Also hand-forged, it measures 8 inches long by 4¾ inches wide. It was badly corroded, and there were no remnants of a handle. Its presence under the floor suggests that it may have been discarded prior to the installation of the wooden floor.

HOUSEHOLD/MESS

Almost 21% of the metal artifacts were assigned to the household/mess category. Of these artifacts, 95.6% are can fragments; the remainder are utensils, dishes, cooking pots, and stove parts.

Cans

Tin cans were first successfully developed in 1810, and canning operations began in this country about

1820. The first can was a simple cylinder with side seams and tops joined by overlapping and soldering. A one- or two-inch-diameter hole was left in the top so the can could be filled. After filling, a cap was soldered over the hole and the can was heated to cook the contents. During processing, a tiny hole was left in the top to vent steam. After the cooking of the contents was completed, the vent hole was sealed with a drop of solder. This style of can is referred to as hole-in-top or hole-in-cap, and cans of this type were produced throughout the nineteenth century.

Before the Civil War canned goods were considered a luxury item with the canning of such items as lobster, sardines, and oysters. In the early 1850s the variety of canned items expanded to include fruits and vegetables. The public, however, was somewhat resistant to canned items owing to fears of lead poisoning and the off-taste caused by contact with metal. Dry merchandise, which could be canned without heat and solder, was more readily acceptable to the public. Thus items such as tobacco, oils, gunpowder, and coffee were commonly sold in tins (Heite 1990; Rock 1978).

Throughout the nineteenth century, food canners tried to improve their product and production methods. After the Civil War, a number of open-top cans were developed. These cans were similar to the hole-and-cap cans except that they were filled and capped in one step. Solder drop vent closures were still used, however. By 1865, the list of canned foodstuffs grew to include such items as chicken, turkey, roast beef, soup, bouillon, and pie fruits (Rock 1978).

Around 1900 the crimped seam "sanitary" can was developed. This can style, with few modifications, is still in use today. By 1918, use of the sanitary can had become practically universal (American Can Company 1943).

The 433 can fragments were predominately corroded body fragments. Where seam type was identifiable, all were joined by soldering rather than crimping, which corresponds to the dates of occupation of the fort. Identifiable shapes consist of 253 round and 35 square. The round cans are primarily milk, fruit, and vegetable-size cans, while the square cans represent meat, spice, and syrup-size cans. Two can fragments exhibit friction-seals similar to seals found on paint cans. In fact, one of these cans still had dried traces of a light-colored paint on the sides.

Of the 39 lids recovered, 33 are slip-off, five are pry-off, and one is rectangular. The slip-off and pry-off lids are similar to those found on cans containing baking powder, dry goods, and lard. The rectangular lid appears to have come from a sardine-style can.

A key with winding from a side strip can was recovered from Room 1 of the old hospital. The winding is so heavily corroded that it has formed a single ball.

A handle to a probable lard bucket was also found. This item came from Room 5 of the officers' quarters in what was probably the kitchen.

Utensils

Portions of 17 utensils were recovered, 12 knives and 5 spoons. Most of the knives are blade fragments ranging in length from 2 to 3½ inches. One of the blades recovered from the soldiers' quarters is made of steel and is similar to one recovered at Fort Bowie (Herskovitz 1978:65–66).

The spoons are all teaspoons and consist of two whole spoons, two bowl fragments, and one handle fragment. The two whole spoons came from the officers' quarters (Figure 17.2). One is a plain pattern, plated spoon measuring 6 inches long. No manufacturer's mark is present on the reverse. The second spoon is of pewter and is snapped at the juncture of the bowl and handle. This spoon measures 4⅞₁₆ inches long. Like the other spoon, no manufacturer's mark is evident on the reverse.



Figure 17.2.
Spoons recovered from the officers' quarters.

Plates

Two tin enameled plates were recovered from the officers' quarters. One of the plates has a diameter of 9 inches and the second measures 8¼ inches in diameter. Both plates are flattened and badly rusted.

Cast Iron Pots

Nine fragments from cast iron pots were found—six body pieces, two handle fragments, and a handle lug. This latter item measures 2 inches by 1¾ inch at its widest point and has a rectangular base with a rounded top. All the edges are beveled.

Cast iron pots were issued by the quartermaster department as a standard cooking utensil. These pots had a flaring top and a 6-gallon capacity. Lugs were cast on either side to hold the wire handle, and three legs were cast on the bottom (Figure 17.3).

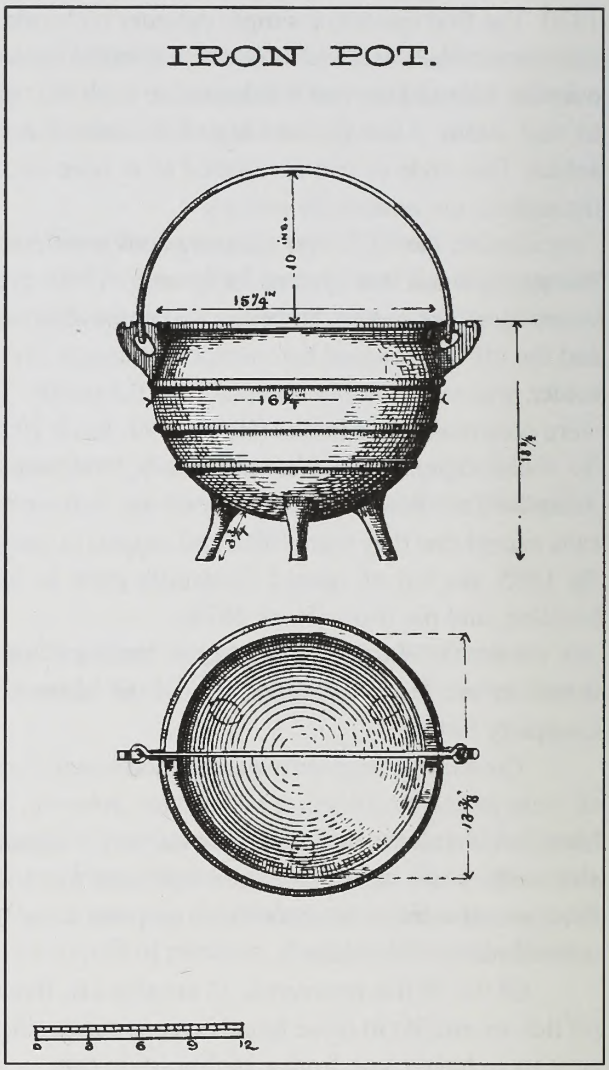


Figure 17.3. *Quartermaster-issued cast iron pot (from Quartermaster General 1889:269).*

Mess Kettle

A possible mess kettle came from the front gate area. Although flattened and bottomless, it has a folded lap seam up one side and measures approximately 7⅝ inches high with a diameter of 5⅛ inches. A wire handle is attached to a hole in a small figure-eight piece riveted to the outside of the bucket.

Stove Parts

Four probable stove parts came from Rooms 1 and 2 of the old hospital: a section of stovepipe, a stovepipe ring, a handle, and a door hinge. The stovepipe measures 6½ inches in diameter and 5¼ inches high. It has an overlap seam held together with rivets.

The handle is curved with a flattened, triangular end (Figure 17.4). Made of cast iron, it measures 6 inches long and has a hole in the flattened end.

The remaining two items are also made of cast iron. The stovepipe ring is fragmentary, but when pieced together it forms a circle with a 12-inch diameter. The hinge measures about 4 inches long and is highly corroded (Figure 17.5).



Figure 17.4. *Possible stove handle.*



Figure 17.5.
Possible stove door hinge.

MILITARY

Fifty-three artifacts were placed in this functional category. These items represent various insignia and equipment pieces.

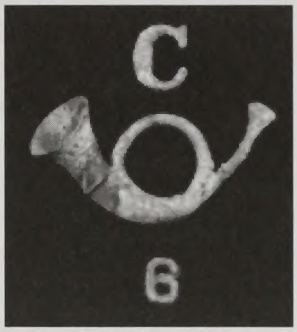


Figure 17.6. *Hat insignia.*

Insignia

Five artifacts represent various styles of insignia. Two are brass regimental numbers—a 1 and a 6 or 9 (Figure 17.6). Both measure ½ inch high and have beveled edges. Two small brass-wire loops were soldered on the back of each number to fasten it to the kepi or forage cap. These items were recovered from the front gate and the old hospital, respectively.

One brass C company letter came from Room 3 of the officers' quarters. Made of sheet brass, this item measures 1 inch high by ¾ inch wide (Figure 17.6). Like the regimental numbers, it was attached to the cap by soldered brass-wire loops.

The remaining two artifacts are one fragmentary and one complete infantry brass hunting horn (Figure 17.6). Made of stamped brass, the style of this insignia was inspired by the French *voltigeurs* or infantry units. Brass wire loops were soldered on the back and secured with leather keys. The insignia were all made of such thin brass that one officer rated them little better than pasteboard and hardly worth the effort to put on the hat (McChristian 1995:14). In November of 1875, General Order 96 decreed that the bugle or horn insignia was to be used only for field and band musicians, including cavalry buglers and bandsmen; the infantry would use the crossed .45-70 caliber rifles (Brinckerhoff 1972; Steffen 1978:152).



Figure 17.7.
Jeff Davis hat pin.

Jeff Davis Hat Pin

Also known as the Hardee hat pin, this brass hat insignia was found in Room 5 of the soldiers' quarters (Figure 17.7). Its stamped design represents an eagle facing his right or "peace" side, holding a ribbon inscribed with E Pluribus Unum in its beak, which extends skyward to the sun's rays, stars, and clouds. Such insignias were worn on light artillery dress between 1855 and 1872 (Brinckerhoff 1972).

Carbine Sling Parts

Four portions of carbine slings consisting of two buckles and two tips were recovered from the soldiers' quarters and the officers' quarters. A buckle and a tip came from Room 5 in the soldiers' quarters, and within the officers' quarters, a tip was recovered from below the floor in Room 1 and a buckle came from below the floor in Room 3. Made of brass, the buckles measure 3⅛ inches long by 2 1/16 inches wide. The buckle from the soldiers' quarters still has a fragment of the leather strap attached (Figure 17.8). The strap measures 2¼ inches wide by ⅛ inch thick and is folded over the center post and fastened by three rivets. The leather appears to have been cut.



Figure 17.8.
Carbine sling buckles and tip.

The tips are also of brass and measure 2 7/16 inches long by 1 inch at the widest point. A fragment of leather strap is attached to the one from the soldiers' quarters and also appears to have been cut. Four small holes are present along the cut edge, suggesting that it may have been repaired.

The carbine sling was used by the cavalry to keep their guns from dropping to the ground when the soldiers were riding. Measuring 60 inches long, it fit over the left shoulder and the snap hook or sling swivel attached to the carbine (Figure 17.9). After the adoption of the carbine loop for the saddle pommel in the 1870s, officers no longer had to wear the sling while riding, but it was used when dismounted (Steffen 1978).

Along with the carbine sling, whether mounted or on foot the cavalry trooper also had to wear his saber dangling from his belt and his pistol holstered on his right hip. The carbine would also be on his right side. With saber and carbine so arranged, this made for an awkward arrangement on foot and on horseback. One of the biggest problems, though, was trying to get in the saddle with all three weapons hanging from the body. While the Cavalry Equipment Board of 1884 was in session, an officer at Fort Supply, Indian Territory, commented on this mounting predicament of some troopers (*Army and Navy Journal* XXI [41, May 10, 1884]:839 as quoted in Hutchins 1984:15):

> It is to be hoped that the Board . . . will do something to transform the cavalryman . . . from a walking arsenal into some faint semblance of the modern soldier. A short-legged individual, and they predominate, of that branch of the Service, girded with his implements of destruction . . . making gigantic acrobatic efforts to mount a sixteen-hand horse, is not a spectacle calculated to impress.

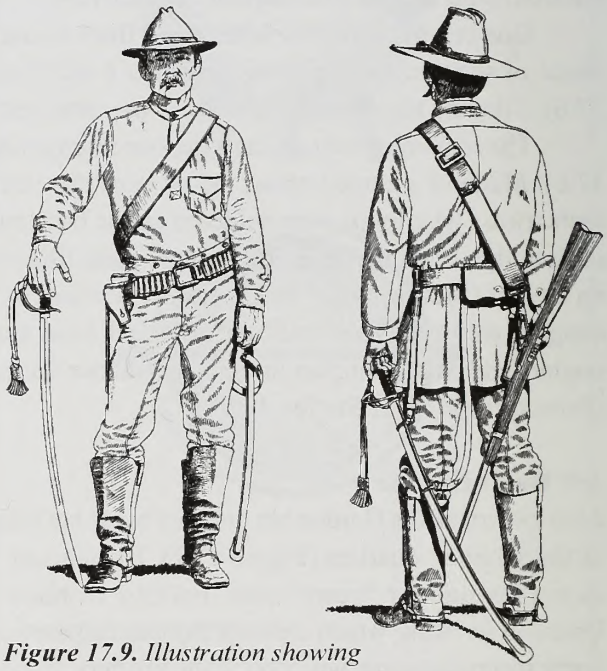


Figure 17.9. *Illustration showing the proper way to wear a carbine sling (from Steffen 1978:133, Fig. 172; 144, Fig. 184).*

Suspender and Trouser Buckles

Four suspender and trouser buckles were recovered during the excavations. One suspender buckle and one trouser buckle came from Rooms 5 and 6 of the soldiers' quarters, respectively; one suspender buckle came from Room 3 in the officers' quarters; and one trouser buckle was found in SU 25. All four items are made of brass and measure 1¼ inch long by ⅞ inch wide (Figure 17.10c). The trouser buckle from Room 5 has the mark H. B. & C°./SOLIDE stamped on its reverse side, which probably represents Horstmann Brothers (N.Y., 1859–1862, and Philadelphia, 1859–1863, 1867–1893) (Herskovitz 1978).

Clasp

A small brass clasp of unknown function came from Room 5 of the soldiers' quarters. This clasp measures 1 5/16 inch long, 1 1/32 inch wide at one end, and ⅜ inch wide at the smaller end (Figure 17.10d). This item may be a clasp for a post–Civil War custom-tailored dress uniform or it might be from a lady's garment.

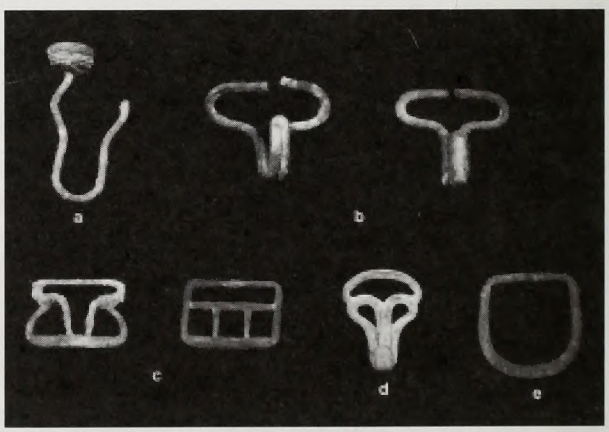


Figure 17.10. *Various hooks and fasteners: (a) unknown toggle, (b) haversack hooks, (c) suspender and trouser buckles, (d) unknown clasp, (e) D-ring.*

Haversack Hooks

Two hooks used to attach a strap to the haversack pouch came from Room 5 of the soldiers' quarters and Room 6 of the officers' quarters. These hooks are made of brass double wire and measure 1 7/16 inch long by 1 5/8 inch wide at the widest point (Figure 17.10b). Haversacks were used by the individual soldier, both infantry and cavalry, to carry his own rations (Figure 17.11). They were worn slung over the right shoulder and rested on the left hip with a tin cup buckled on the outside. After large saddlebags became available for the cavalry, the haversack was seldom taken into the field but was still used on dismounted service (Hutchins 1984:18).

Haversack D-Ring

A small brass D-ring measuring 1 1/4 inch wide by 1 3/8 inch long came from Room 1 of the officers' quarters (Figure 17.10e). The D-ring was sewn on the back of the haversack and used to hold the strap hook (see Figure 17.11).

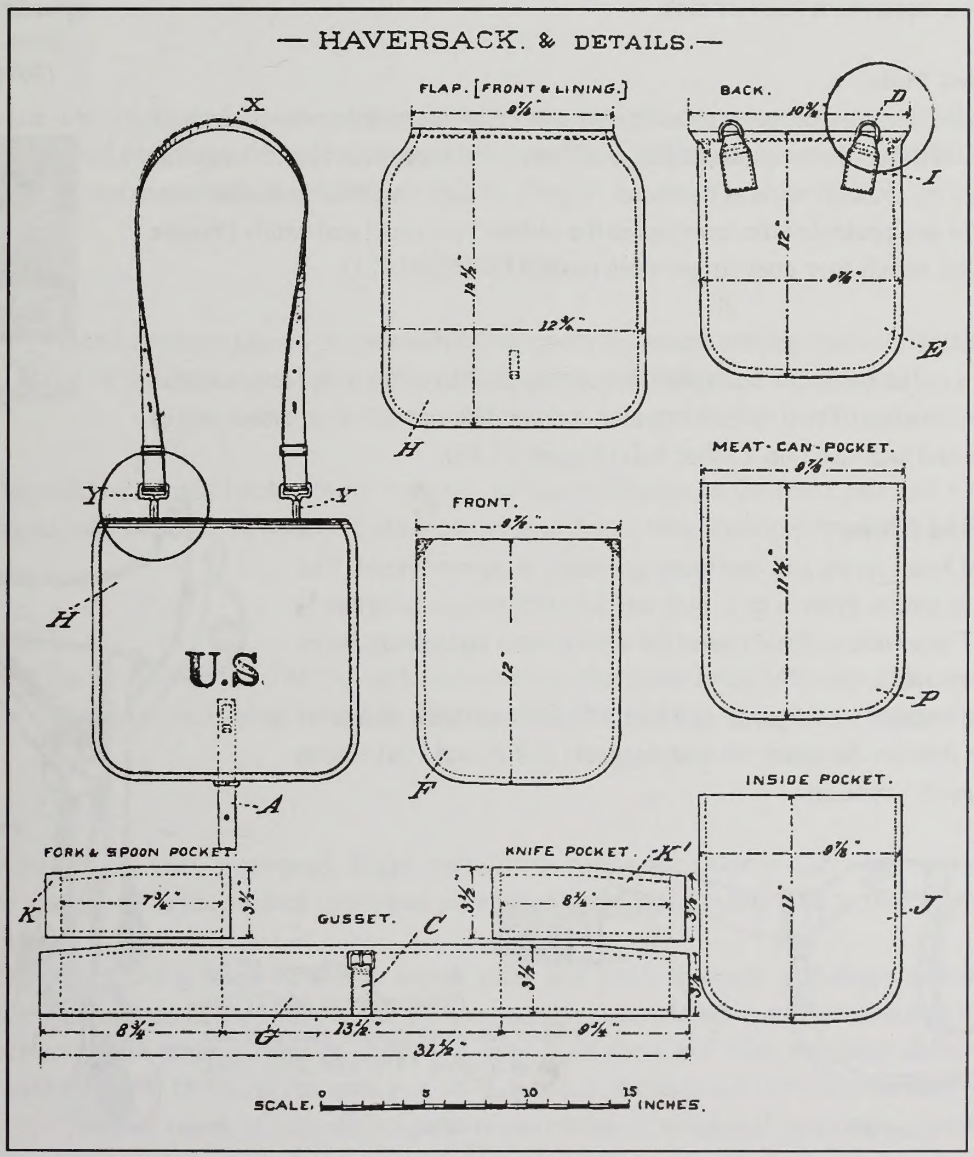


Figure 17.11. The various parts of a haversack (from Hutchins 1984:49).

Scale Slide

A scale slide for an epaulet came from SU 21 of the new hospital. This item is made of brass and measures 2⅞ inches long by ½ inch wide. Both ends are bent at a 90° angle and have three small holes where the piece can be sewn onto the shoulder of the jacket (Figure 17.12).



Equipment Buckles

A small brass buckle with a partial leather strap was recovered from Room 3 of the officers' quarters. The buckle measures ⅞ by ¾ inch and ⅛ inch wide; the leather strap is ⅝ inch wide. This item may be from an equipment pouch.

Two badly corroded iron buckles were also found. One came from Room 6 of the officers' quarters and measures 2¾ inches long by 1⅞ inch wide. The second buckle came from SU 25 and measures 1½ inch long by 1¼ inch wide. Owing to their corroded state, their exact function could not be ascertained, but the sizes suggest use on equipment belts or tack.

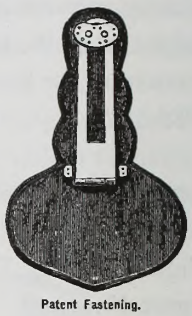


Figure 17.12. *Epaulet scale slide (from Jacobsen 1989:14, 44).*

Saddle Guard Plate

A saddle guard plate or an escutcheon from a McClellan saddle was recovered from Room 5 in the soldiers' quarters. Made of brass, this piece is oval and measures 1¹¹⁄₁₆ inch long by 1⅛ inch wide at its center (Figure 17.13). Ovals such as this were in use by 1874 and protected the mortises in the saddle's pommel and cantle (Figure 17.14) through which four coat straps were passed (Steffen 1973).



Figure 17.13. *Saddle guard plate.*

Saber Belt Stud

Resembling a collar stud, this brass item was recovered from the large room within the bakery. It consists of two ⅝-inch circular convex disks attached on either end of a center post and was used on a saber belt (Figure 17.15).

Grommets and Rivets

Twenty-eight brass rivets and one brass grommet were recovered. The rivets range in length from ¼ to ⅝ inch and have diameters between ⅜ and ⁹⁄₁₆ inch. They were probably used for such leather equipment items as belts and pouches.

The grommet is two-piece and has a ⅝-inch exterior diameter and a ¼-inch interior diameter. Its size suggests that it could have been used on a tent or tarpaulin.

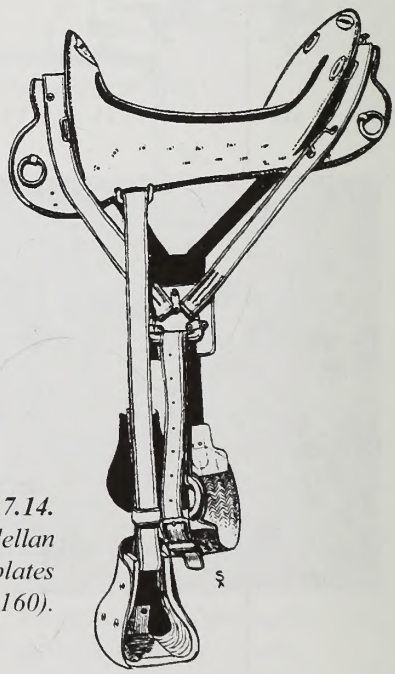


Figure 17.14. *Illustration of McClellan saddle showing saddle guard plates (from Steffen 1978:104, Fig. 160).*

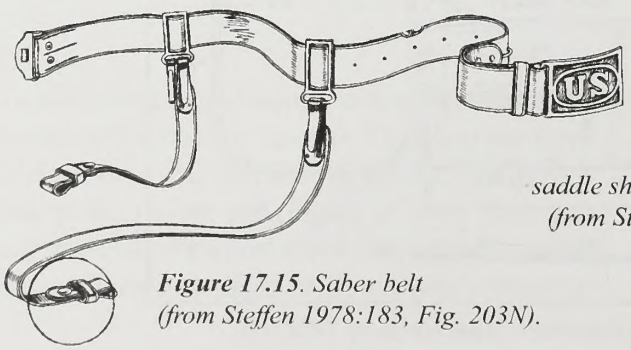


Figure 17.15. *Saber belt (from Steffen 1978:183, Fig. 203N).*

STOCKRAISING AND SUBSISTENCE

The seventeen artifacts placed in this category are related to gardening and animal husbandry. These items consist of various fragments of wire, staple nails, and a hoe blade.

Wire

Eleven fragments of fence and baling wire were recovered from the front gate ($n = 2$) and the officers' quarters ($n = 9$). One was a piece of barbed wire, six were single-strand, and four were twisted double-strand. The barbed wire and one fragment of single-strand wire came from the surface collection at the front gate and may not be associated with the military occupation of the fort.

Hoe

A hoe blade was found beneath the floor in Room 2 of the officers' quarters. It measures 8 inches high by 6 inches wide and appears to be hand-forged. The lower portion of the wooden handle is still attached to the backside of the hoe.

Staple Nail

Five handmade wire staple nails were recovered—one from the officers' quarters, one from the hallway in the new hospital, and four from the trash dump to the east of the hospital. All five measure 1½ inch long by 1 inch wide. These were probably used for fencing.

CLOTHING

Most of the 100 metal artifacts placed in the clothing category represent sewing accessories, fasteners, and shoe pieces. Many of the items could also reflect military-issue clothing and equipment.

Buckles

One outer fragment of a brass buckle came from the surface collection at the front gate and a second brass buckle fragment was found in the bakery. Both measure less than 1 inch wide and appear to be from trousers or overalls.

Unknown Hook

Found beneath the floor in Room 5 of the soldiers' quarters, this brass hook-like item measures 2 1/16 inches long with the main body measuring ⅛ inch in diameter (Figure 17.16a). It may be a toggle for covering a button.

Shoe Screws

Ten brass shoe screws were recovered. Eight came from below the floor in the white ward of the new hospital, one was found in the surface collection at the front gate, and the last was recovered from the floor in the bakery.

The method of using brass screws to attach soles and heels to boots and shoes was suggested by frontier officers in Arizona in the 1860s as the footgear used by the soldiers could not stand up to the hot, dry climate. Because of the large surplus of shoes left over from the Civil War, the army did not act on the suggestion until the early 1870s. In the spring of 1872, a board of officers recommended that 3,000 pairs of boots and 2,000 pairs of shoes of a modified pattern consisting of natural-shaped lasts and attachment of soles by brass cable screws be manufactured for field testing in active service and that serviceability reports

be made to determine if the new style would be adopted as standard. By late 1872, the quartermaster general reported that the new footwear had passed the trials and would be adopted (Brinckerhoff 1976:5–6).

This new footgear was not without problems, however. Complaints that the screws penetrated through the insole to pierce the feet of the wearer were reported from at least two forts in late 1874. Examination of these shoes showed that the screws used were defective and were ordered returned to the quartermaster department to be replaced by the contractor (Brinckerhoff 1976:8). The complaints continued until the specifications for issue footgear were changed in 1884 with the re-adoption of sewn soles (Herskovitz 1978:125).

Thimble

A copper/brass thimble was recovered from the floor fill of the bakery. This artifact measures 5/16 inch high with a base diameter also of 5/16 inch. The outside is decorated with small punctates separated by a plain band circumventing the thimble near its base (Figure 17.16b).

Straight Pins

Forty-one straight pins were recovered—33 from the floor and below the floor in Room 3 of the officers' quarters and 8 from the old hospital. Used for sewing, these pins ranged in size from 3/4 to 3 inches long, with 1 inch being the most common length (Figure 17.16c).

Snaps

Four tin snaps and one brass snap were also recovered from Room 3 of the officers' quarters. The brass snap is a male end and probably was used on a shirt. Three of the tin snaps still had remnants of reddish fabric attached, which appears to be from a jacket.

Wire Clasps

Eleven wire clasps came from Room 3 of the officers' quarters. Made from thin brass wire, these clasps are similar to modern bra clasps.

Lace Tip

A brass lace tip with a small amount of cloth (possibly a boot- or shoelace) still enclosed was recovered from Room 5 of the old hospital (Figure 17.16d). The tip measures 3/4 inch long.

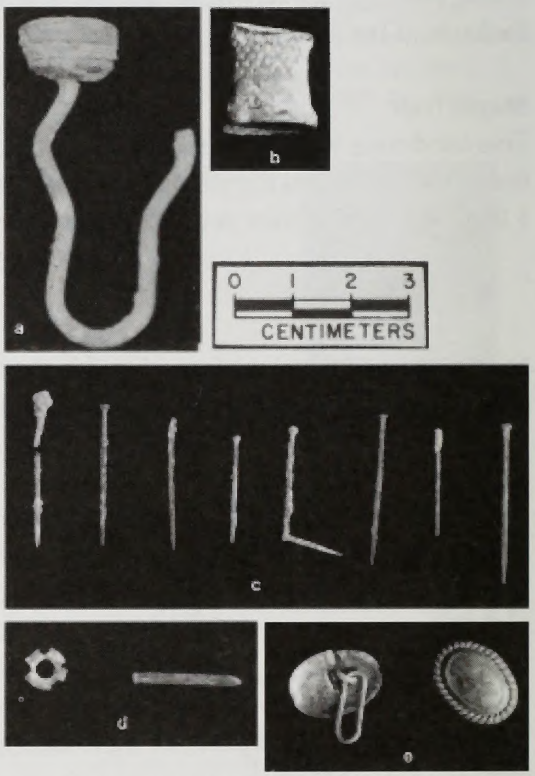


Figure 17.16. *Various items related to the clothing category: (a) unknown toggle, (b) thimble, (c) straight pins, (d) shoe eyelet and lace tip, (e) cufflink.*

Shoe Eyelet

A small brass eyelet with an 1/8-inch-diameter hole came from Room 3 of the old hospital (Figure 17.16d). This item appears to be from a shoe.

Cufflink

Half of a gold-plated cufflink was found below the floor in Room 3 of the old hospital (Figure 17.16e). The cufflink is oval with a rope pattern around the edge. The backing is brass. The glue holding the pieces together is dried out.

Rivets and Burrs

Eight copper rivets and rivet fragments, and 18 rivet burrs and burr fragments were recovered from Rooms 5 and 6 of the soldiers' quarters. All of the rivets have a 5/16-inch-diameter head, and the whole rivets measure ¾ inch long. The rivet burrs are of two sizes—⅜ inch and ½ inch diameters. Similar copper rivets and burrs have been found at Fort Bowie; the smaller rivets and burrs were used as reinforcements for clothing, the larger for tents and harness equipment (Herskovitz 1978:64).

TRANSPORTATION

Thirty-three artifacts were placed in the transportation category. These items consist primarily of wagon parts and animal trappings.

Wagon Parts

Seventeen items were readily identified as belonging to wagons. These items probably do not represent all of the wagon parts recovered at Fort Craig, as many of the rod and bar fragments placed in the indeterminate category more than likely represent wagon parts. Their fragmentary and corroded condition, however, precluded a positive identification. The seventeen artifacts consist of 15 possible spring fragments, a wheel rim, and a carriage bolt.

The spring fragments and wheel rim were found beneath the floor in Room 1 of the officers' quarters. The spring fragments measure 2⅛ inches wide. The wheel rim has a diameter of 3.28 feet and a width of 1½ inch. The exterior of the wheel rim is convex while the interior is flat.

The carriage bolt came from Room 2 of the old hospital. It measures 3 inches long by ¾ inch in diameter.

Animal Shoes and Nails

Twelve animal shoes and three nails were recovered. The three nails are all unused and measure 1½ inch long.

The twelve shoes consist of six horseshoes, five mule shoes, and one ox shoe. This latter item came from the old hospital and is actually a fragment of a half shoe. It is too corroded to ascertain manufacturing technique.

Four of the horseshoes are whole and two are fragments. Two of the whole shoes came from the soldiers' quarters, one came from the officers' quarters, and the fourth was found in the new hospital. The two half shoes came from the old and new hospitals. Both shoes recovered from Room 5 of the soldiers' quarters were blanks.

The first shoe, found in the roof and wall fall stratum in the northeast corner near the interior doorway, was originally designed for a large horse—probably not a saddle horse but a horse being used in harness. The size of the shoe indicates the horse would have weighed between 1,500 to 1,800 pounds. The shoe is shaped for the hind hoof, but there is no evidence of wear on the shoe to help determine which side of the horse it was used on. There is no evidence of nails in the shoe. Nails will show up even in a shoe that is in poor condition because the nails are manufactured from a higher grade of iron and their grain would be going in a different direction.

The shoe also has no evidence of heel or toe calks. Heel calks would be a common addition to a horseshoe of this size. Because of the lack of wear, calks, horseshoe nails, or evidence of custom shaping, this artifact may be an unused, machine-made blank. Blank shoes were made in standard sizes for front or hind hooves and bought in bulk from a factory. A blacksmith would then shape a blank for each hoof.

The second shoe was recovered from below the floor along the northern wall of the room. This front shoe for a saddle horse is machine made. As with the first shoe, there is no evidence of heel or toe calks or nails. The shoe also lacks evidence of wear or custom shaping so it is not possible to determine the side of

the horse it was intended for. This shoe, like the first one, may have been a blank that was kept in storage until it was needed.

The horseshoe found in the officers' quarters is machine made and exhibits very little wear or evidence of having been worked by a blacksmith. No nails were in the shoe. The limited amount of wear suggests that it was not discarded as waste. It is highly likely that the shoe was being saved for future use.

The last whole horseshoe came from below the floor in the black ward of the new hospital. Although somewhat corroded, the shoe appears to be hand-forged with unevenly spaced nail holes and no evidence of a groove or heel caulks. Clinched nails are still present, and there is slight wear on the toe. This artifact appears to be a front shoe for a horse measuring 15–16 hands.

The mule shoes consist of four whole ones recovered from the officers' quarters and a half shoe found in the hallway of the new hospital. The mule shoe fragment appears to be machine made. The wear on this shoe suggests it was for a hind hoof of a mule measuring 15–16 hands. It is well worn and was discarded after breaking.

The four whole shoes are also assumed to be machine made, as they show no evidence of being hand-forged. No evidence of nails was found in any of the shoes, nor did any of them exhibit substantial amounts of wear or evidence of having been worked by a blacksmith. It is likely that none of the shoes had ever been used, but their deteriorated condition prevents confirmation of this suggestion. The style of the shoes and the likelihood that they were machine made suggest that they date to the late Civil War period or, more likely, post Civil War.

Awl

A hand-forged iron awl came from the wall/roof fall stratum of the black ward in the new hospital. It measures 3 inches long and was probably used for punching holes in harness leather.

FURNITURE

Fifty-four artifacts were assigned to this functional category. Most of these items are probably carpet tacks.

Drawer Handle

A possible drawer or cupboard handle was found in the surface collection at the front gate. This item is made of iron/steel and measures 3 inches long by ¾ inch thick. There is no way to determine if this handle is related to the military or the civilian occupation of the fort.

Upholstery Tacks

Four upholstery tacks—one from the soldiers' quarters, one from the new hospital, and two from the old hospital—were recovered. These tacks are made of brass and have large, domed heads. All three have 1-inch-long shafts and ¾-inch-diameter heads.

Carpet Tacks

Forty-seven carpet tacks were recovered. Fourteen came from Rooms 1, 3, 4, and 6 in the officers' quarters; three were from the white ward in the new hospital; four came from the trash dump east of the new hospital; and 26 were found in various rooms in the old hospital. As is typical of cut nails, the similarly shaped iron tacks have heads only slightly larger than the cross-section of the shaft (Figure 17.17).

The shafts range from ½ to ⅞ inch long. The presence of these tacks suggests that some of the rooms had carpeting. This premise is supported by the recovery of several fragments of fabric carpet padding found in the officers' quarters.



Figure 17.17.
Carpet tacks.

Picture Hanger

A picture hanger was found in Room 3 of the officers' quarters. This item measures 1¼ inch long by ⅛ inch wide. Opposing curves are found on either end, and the top curve has a small hole for a nail.

Decorative Railing

A small fragment of a railing-like object came from Room 1 of the old hospital. Measuring 4½ inches long, the rail portion is made of iron and the stations are of brass (Figure 17.18). This item may have served as a decorative railing for a shelf or desk.

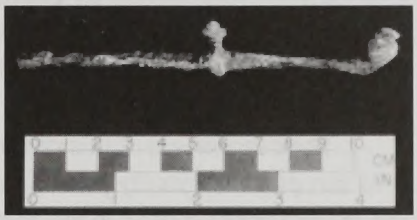


Figure 17.18. Decorative railing.

INDULGENCES

The four items placed within the indulgence category are all related to beverages. These artifacts represent both bottled and kegged beverages.



Figure 17.19. Lock cock.

Lock Cock

A brass lock cock with keyhole came from Room 1 in the officers' quarters (Figure 17.19). Measuring 6⅝ inches long, the shaft exhibits threading so the item could be screwed into a keg. A key was used to open and close it. No manufacturer's mark was noted. A similar artifact was found in the billiard room of the trader's store at Fort Bowie (Herskovitz 1978:67).

Crown Cap

Two crown caps were recovered. One came from the wall/roof fall stratum in Room 1 of the officers' quarters and the other was from the same stratum in the white ward of the new hospital. Crown caps made their appearance on bottles in 1892 (Lief 1965). Thus, these artifacts postdate the closure of the fort and could represent the civilian occupation of the fort.

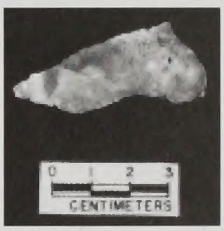


Figure 17.20. Part of a foil wrapper from a wine bottle.

Foil Wrapper

A fragment of a lead foil wine bottle seal was recovered from Room 1 of the old hospital (Figure 17.20). The letters ...ORDEA... suggest Bordeaux, France as the place of origin.

COMMUNICATION

The communication category, as it relates to the Fort Craig assemblage, pertains to the written record, both military-related and personal. Letters, record keeping, and journals were an important activity at any frontier fort. The five artifacts placed in this category all reflect writing activities and the posting of documents.

Thumbtack

The head of a thumbtack came from Room 1 of the officers' quarters. The head measures 5/16 inch in diameter. This item may have been used to post notices or other materials to a bulletin board.

T-Brad

A brass paper fastener or T-brad was found in the officers' quarters. It measures 9/16 inch long with a ½-inch-long head.

Mailbox Part

The front portion of a mailbox was found in the white ward of the new hospital. This artifact is a brass piece stamped LETTERS and measures 4⅜ inches long by 1¼ inch wide by ⅛ inch thick (Figure 17.21). Part of one small eyelet to hold the hinge pin is still present along the top above the E and T; the second one above the R is broken off.



Figure 17.21. Mailbox piece.

The exact origin of this item raises some interesting questions. Was this piece originally part of a mailbox from the Fort Craig post office that was later used in the hospital? Was a mailbox present in the hospital for use by hospital personnel and patients? Did this item have nothing to do with the hospital and is just a product of discard?

The Fort Craig post office was established on March 22, 1855, with Ignacy Sumouski, the post sutler, as its first postmaster. The post office was discontinued on May 26, 1879, because of the closure of the fort. When Fort Craig reopened, perhaps some of the old post office equipment was distributed in other buildings throughout the fort. Clearly further examination of the post records is needed to answer any of the above questions.

Pen Nibs

Two steel pen nibs were recovered from Rooms 2 and 5 of the old hospital. The tip of one is broken off (Figure 17.22).



Figure 17.22. Pen nibs.

PERSONAL

The 34 artifacts in the personal category provide an interesting look at life in the fort. These items represent toys, leisure activities, and coinage. Most of the artifacts came from the officers' quarters.

Watch Gears

Two inner gears from pocket watches or clocks came from the bakery and inside the front gate. The first gear is made of brass and measures 1 inch in diameter and 1/16 inch thick. No manufacturer's mark is visible.

The second gear, a fragment, is approximately 1.5 inches in diameter. The gear was partially cleaned, but no manufacturer's mark was apparent.

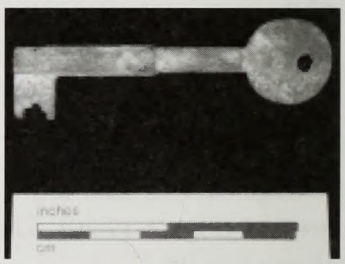


Figure 17.23. Brass key.

Key

A brass key, 2½ inches long and ⅛ inch thick, was found below the floor in Room 5 of the soldiers' quarters (Figure 17.23). It appears to be a "Smyth" key, which functioned as a general service key for a brass lock (Mr. H. Pott, personal communication 1991). It does not appear to be of military issue.

Coins

Seven coins of various denominations were recovered from the excavations—one from the soldiers' quarters, four from the officers' quarters, and two from the old hospital (Figure 17.24). They were found either on the floor or in the stratum below the floor.



Figure 17.24. Coins. Top row left to right: 1875 Seated Liberty dime, reverse side of Seated Liberty half dime, obverse side of 1850 Seated Liberty half dime, 1851 Liberty head gold dollar; bottom row left to right: 1858 Flying Eagle cent, reverse side of 1881 Indian Head penny, 1867 shield nickel, 1876 Seated Liberty quarter.

Flying Eagle Cent

One 1858 Flying Eagle cent was found below the floor in Room 3 of the officers' quarters. Designed in 1856 by James Longacre, the Flying Eagle cent was the first of the small cent coins. It was rejected by the public because of its small size. In addition, instead of being struck with pure copper, its composition was 88% copper and 12% nickel, resulting in a coin that was pale enough to be called white. This too led to the coin's unpopularity. In 1858, 24,600,000 of these coins were minted. The following year, the Flying Eagle cent was replaced by the Indian Head cent (Hudgeons 1992:154).

Indian Head Penny

One Indian Head penny minted in 1881 came from below the floor in Room 1 of the officers' quarters. Indian Head cents were first coined in 1859 as a replacement for the Flying Eagle cent. Unlike the Flying Eagle cent, the Indian Head penny proved to be successful and remained in production without a change in its design for half a century, until 1909 (Hudgeons 1992:155).

Designed by James Longacre, the portrait is that of an Indian maiden. At one time it was thought that Longacre had used an Indian girl as his model, but this was dismissed when it was suggested that the profile resembled his daughter. It is now generally believed that no live model sat for the portrait, but that it was based on classical statuary, of which Longacre was known to be a collector (Hudgeons 1992:155–156).

Half Dime

Two half dimes were recovered during the excavations—an 1850 from the floor in Room 3 (SU 31) in the old hospital and an 1857 from below the floor in Room 4 in the officers' quarters. Half dimes were first minted in 1795 and stayed in production until 1873. Throughout its history the half dime underwent several design changes. The original obverse design was the Flowing Hair Liberty, similar to other coins of the day. The reverse consisted of the standing eagle and the legend UNITED STATES OF AMERICA. A year later, this design was replaced by the Draped Bust type with similar reverse, and in 1800 with the shield eagle reverse.

Starting in 1829, the Capped Bust was introduced in conjunction with a slight modification of the shield eagle—wings downward instead of upward. The sharpest departure occurred in 1837 with the introduction of the Seated Liberty on the obverse and the wording HALF DIME within an open wreath encircled by UNITED STATES OF AMERICA on the reverse. This design, with some modifications, remained until the series closed in 1873. In 1850, 955,000 half dimes were minted in the United States. The number minted increased to 7,280,000 in 1857 (Hudgeons 1992:177).

Shield Nickel

An 1867 shield nickel was recovered from the floor stratum in Room 3 of the old hospital. Shield nickels were introduced in 1866 as a companion to the half dime. Owing to labor shortages in the silver mines, general inflation, and the bullion shortage of the Civil War half dimes became expensive to mint. Congress had no intention of replacing the half dime but wanted, at the same time, to introduce a coin of proportionate value made of base metal and to popularize it. As a result the true nickel or five-cent nickel was born (Hudgeons 1992:168).

The shield nickel was authorized by Congress on May 16, 1866. It was to have a weight of 5 grams and consist of three parts copper and one part nickel. The diameter was 20.5 mm. Designed by James Longacre, the first series consisted of a portraitless coin with a shielded obverse and the number 5 on the reverse surrounded by stars and rays. The motto "IN GOD WE TRUST" appeared above the shield. Almost 15,000,000 coins were minted the first year. In 1867, the rays were removed from the design. In 1883, this nickel was replaced by the Liberty Head nickel (Hudgeons 1992:168). The coin recovered from Fort Craig had no rays.

Seated Liberty Dime

One 1875 Liberty Seated dime, in good condition, was recovered from below the floor in Room 5 in the soldiers' quarters. Dimes were one of the first coins authorized by the U.S. Mint, though production did not begin until 1796. The early dimes had a variety of designs. In 1837 the most radical design change occurred with the introduction of Liberty Seated. The reverse of this coin contained only the words "ONE DIME" within a wreath, surrounded by the inscription "UNITED STATES OF AMERICA." These dimes were replaced in 1892 by the Liberty Head or Barber design (Hudgeons 1992:182).

Seated Liberty Quarter

An 1876 Seated Liberty quarter was found on the floor in Room 4 of the old hospital. Seated Liberty quarters were first produced in 1838. The reverse consisted of the shield eagle beneath which appeared the words "QUAR. DOL." Designed by Christian Gobrecht, it was struck at both the Philadelphia and New Orleans mints. In 1853 the coin's weight was reduced to 6.22 grams and arrows were placed at the date to signify that less silver was now used in the coin. On the reverse, sunrays were added behind the eagle. In 1866 the phrase "IN GOD WE TRUST" was added to the reverse on a banner between the eagle and the slogan "UNITED STATES OF AMERICA." When the weight was slightly changed to 6.25 grams in 1873, arrows were added to the eagle's talons and the sunrays were removed. The arrows were removed in 1875. Like the dime, the Seated Liberty quarter was replaced in 1892 by the Liberty Head or Barber design (Hudgeons 1992:201).

One Dollar Gold Piece

One 1851 gold dollar came from below the floor in Room 3 of the officers' quarters. During the early years of the mint, no gold dollars were struck as it was believed that silver would be adequate for this denomination and that gold should be restricted to coins with a higher face value. Following the 1849 gold strikes in California, people, especially in the West, began to trade with bullion rather than coinage. Consequently, later in 1849 a gold dollar was introduced.

As with many coins of the mid-1800s, this one also was designed by James Longacre. This coin featured a Liberty head encircled by a series of stars on the obverse and a wreath and Arabic numeral one on the reverse. Because of its diminutive size, only 13 mm in diameter, elaborate designs were not possible. Weighing only 1.672 grams, the coin was composed of 90% gold and 10% copper. In 1854, the Liberty head was replaced by an Indian head and its diameter increased to 15 mm. A final change in design occurred in 1856 when the size of the Indian head was increased. The coin was minted until 1889. In 1851, the Philadelphia mint issued 3,317,671 of these coins (Hudgeons 1992:239).

Harmonica

The outer covering of a harmonica came from the lower level of Room 6 in the officers' quarters (Figure 17.25). Measuring 4½ inches long and 1 3/16 inch wide, the cover is embossed with TREMOLO CONZERT. Tremolo Concert harmonicas were manufactured by Ands Koch and sold for 65–70 cents each in 1902 (Sears Roebuck and Co. 1969:207).

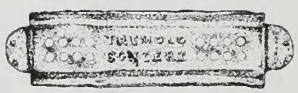


Figure 17.25. *Harmonica cover (illustrated by Sara Eidenbach).*



Figure 17.26. *Toy soldier (not to scale).*

Tin Soldier

One tin toy soldier came from below the floor in Room 3 of the officers' quarters. The soldier is flat and mounted on a metal base (Figure 17.26). The coat is painted blue and the pants are red. The pants are tucked into knee-high, black boots. The style of uniform

and the mustache on the face suggest this toy may be modeled after a Prussian soldier. The soldier stands 4 mm high, which was known as the Berlin scale. No manufacturer's mark is present on the base.

Tin soldiers of this style have been made since the early 1800s, primarily by German manufacturers. Sold in flats, the soldiers were cut or stamped from sheets of tin and then hand-painted or lithographed. After 1830 there was an increase in the production of these toys as improvements in communication technology meant that news of wars in other countries spread more quickly, and there were frequent conflicts to provide a continual supply of subject matter (Ketchum 1985; King 1979).

Scissors

A pair of scissors and a scissor blade fragment came from Room 3 of the officers' quarters and from Room 6 of the old hospital, respectively. The scissors measure 4¾ inches long with cutting blades measuring 3 inches long. They could have been used for sewing or for cutting paper. The blade fragment also had a projected length of 3 inches.

Spur

A child-size replica of a cavalry spur came from below the floor in Room 4 of the officers' quarters. The spur measures 2½ inches long by 2½ inches wide and appears to be hand-forged. The shape of the spur indicates that it went on the left foot.

Container

A small tin container with a slip-on lid was recovered from below the floor in Room 3 of the officers' quarters. This container measures 3 inches in diameter and stands ½ inch high. The lid measures 5/16 inch high. Several BBs and three pewter buttons were found inside.

Fishing Swivel

A complete fishing swivel came from Room 7 of the old hospital. Measuring 1⅜ inch long, it has a single strand of heavy gauge wire slipped through a metal bead. Both ends of the wire are twisted to form eyelets through which spinners and hooks were attached.

INDETERMINATE

The 525 artifacts placed in the indeterminate category were, for the most part, too corroded and/or fragmentary to determine their function. Artifacts that could be identified as to form are listed in Table 17.3. Unfortunately, when seen out of context of their original construction or without the other constituent parts, their function could not be determined.

Three brass items recovered from Room 1 of the old hospital were especially interesting. The first of these appears to be part of a surveying instrument or inclinometer (Figure 17.27). The T-shaped item has an off-center pivot with counter balance. Degree markings are stamped into the arms. The markings only have a span of 20°, 10° to each side of center.

The second artifact is an L-shaped piece with a short, triangular iron shaft inserted into it (Figure 17.28). Two Xs are stamped into the brass where the iron shaft was inserted. It measures 1¾ inch long by ⅜ inch wide. A notch is cut into one end, which suggests this item may be part of a sighting device.

The third item is columnar and measures 4 1/16 inches long by 7/16 inch in diameter. It is slightly tapered, hollow, and has a slot cut into the side at one end (Figure 17.29).

Table 17.3. Metal Artifacts of Unknown Function

Material	Description	No.	Length/ Height	Width	Thickness/ Diameter
FRONT GATE					
Brass	Tubing	1	3		
Copper	Tubing	1	2½		
Tin	Cover-like fragments	2			
Copper	Fragments of a decorative piece	3			
Copper	Wire	1	1		
SOLDIERS' QUARTERS					
Brass	Tube halved lengthwise	1	2⅜		1/16
Brass	Snippet, wire-like and curled	1			
Brass	Hand-cut disc	1			1½
Brass	Hand-cut disc with attached copper wire	1			5/16
Brass	Tube with slight groove around shaft at end	1	¾		3/16
Brass	End fragment to small tab	1	¼	⅛	
Steel/Iron	Bar	1	12	3	1½
Steel/Iron	Bar, trapezoidal in cross-section	1	6	2	½
Steel/Iron	Y-shaped, badly rusted	1	5½		
Steel/Iron	Barrel hoop fragments (?), badly rusted		6	1	¼
OFFICERS' QUARTERS					
Iron	Hand-forged bar fragment	1	4	1½	½
Iron	Hand-forged bar fragment	1	6	1½	⅜
Lead	Bent, crimped U-shaped	1	3¼		⅛
Brass	Tube with groove inset with cut leather	1	4		¼
Copper	Wire fragments	6			1/16
Iron	Chain fragments	11			
Iron	Hand-forged U	1	9½	8⅛	¾
Iron	Hand-forged with scalloped edge	1	2⅛	2 3/16	¼
Iron	Spool	1	5	4¼	
Iron	Rectangular fragment	1	1¾	1¼	½
Iron	Hand-forged U	1	2½	1¾	½
Iron	Disk with center hole	1	2		⅜
Iron	Conical pipe fragment	1	2⅞		1½
Iron	Hand-forged U	1	7½		⅞
Iron	Hand-forged bar fragments, fit together	2	56		1¼
Iron	Ring	1	4		½
Iron	Hand-forged rod	1	4¾		½
Iron	L-shaped fragment	1	1¾	1½	½
Iron	D-ring	1	3¼	2¾	½
Tin	Cut tin with scalloped edge	1	1	1¾	1/16
NEW HOSPITAL					
Alloy	Wire fragments	3			⅛
Tin	Disc	1			¾
Alloy	Wire fragment	1			1/16
Iron	Ring fragments	3			¾
Alloy	5-strand twisted wire	1			
Brass/Iron	Bar	1		⅝	¼
Iron	Chain link	1			
Iron	Oval ring (badly corroded)	1	2⅞	2⅛	
Iron	Fragments of bar (badly corroded)	7		1 3/16	¾

Table 17.3. Continued—

Material	Description	No.	Length/ Height	Width	Thickness/ Diameter
Iron	Bar fragments	2		1¼	¾
Iron	U-shaped rod	1	4 ½	2¾	½
Iron	Rivets	2	1		5/16
Lead	Slug (?)	1			½
Iron	Bar fragment with 2 holes	1		1¼	⅜
Iron	Bar fragment with one tapered end	1		1⅛, ⅞	
Iron	Bar fragment	1		2⅛	7/16
Iron	Chain link	1			
Iron	Rivet	1	1⅛		¾
Iron	Bar fragments with one curved end	2		1	
Alloy	Wire fragment	1			1/32
Brass	Rod fragment	1	1 9/16	1/16	1/16
Brass/Iron	Crank handle	1	2⅝		
Iron	Rivet	1	1¾		¾
Lead	Flattened slug (?)	1			1¼
Iron	Bar fragment	1	1		¼
Tin	Folded piece shaped like scallop shell	1	1⅞		1½
Brass	Rivet	1	½		½
Brass	Rod fragment	1			1/16
Iron	Ring fragment	1			⅛
Iron	Chain link	1			
Iron	Bar fragment	1		2¾	
Iron	Bar fragment	1		1	¼
Iron	S-shaped unknown fragment	1	1	⅜	⅛
Brass	Thin unknown fragment	1		½	
Iron	Chain link				
Copper	Wire fragments	2			1/32
Iron	Small disc with pointed end	1	1	¾	⅛
Alloy	Wire with eyelet on one end	1	1		1/16
Old Hospital					
Iron	Ca. 12-gauge wire	2	3½		
Ferrous	Discoid, crenelated edges on opposing quarters	2		1½	1/32
Iron	Lobed at one end with central hole	2	3	1⅛	⅛
Brass	Partially rolled sheet	1	4 7/32	1¼	
Brass	Ferrule ring?	1		9/16*	⅜
Iron	Bar in four fragments	4	11	1⅛	
Iron	12 gauge wire	1	1¾		
Iron	Hook shape, possibly originally a D-ring	1	4¼	2½	⅝
Iron	Flanged and angled	4	4¼	¾	1/16
Iron	Flanged and angled	2	4¼	1	1/16
Ferrous	Sheet metal, 2+ tabs on one edge, ends riveted with 3 rivets	10	18	5½	1/32
Brass/Iron	Brass slot with ferrous lever-operated cover, slot is 4" long	1	4½	¾	1½
Brass	Forms double loop with solder in the center	1	1 3/16	⅛	1/32
Brass	Cap with slotted insert	1		7/32	9/64
Ferrous	Ring	2		3⅝	1/16
Iron	Shank with hook	1	¾	¼	⅞
Iron	Shank with curve at one end	1	3½		⅞
Lead	Slug (?)	1			

All measurements are in inches. * = interior diameter



Figure 17.27.
Unknown brass piece.



Figure 17.28.
Unknown brass piece.

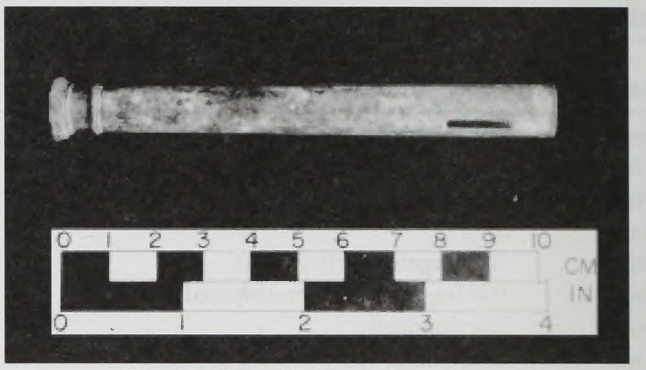


Figure 17.29. *Unknown brass piece.*

SUMMARY

For the most part, the metal artifacts recovered from the excavations appear to be related to the occupation of the fort. When examined as a whole, this assemblage of metal artifacts is typical of what one would expect to find. Both military and civilian items are present and reflect various aspects of daily life at the fort.

The hand-forged iron items may have been manufactured at the site by the blacksmith. Other items, such as those in the military and clothing groups and a few in the household/mess group, are clearly associated with the military occupation of the fort, whereas those in the stockraising/subsistence group could represent both the military and post-military occupation.

The vast majority of the nails are in a fragmented and/or badly deteriorated state. The relative paucity of whole nails suggests that materials were salvaged after the fort was abandoned. If such is the case, then as late as 1887 such seemingly commonplace items as nails were still a valuable commodity, worthy of salvaging in this region of New Mexico. The poor nail preservation prevents a quantitative comparative analysis between hand-wrought and machine-cut nails. The near absence of wire nails is appropriate for pre-1887 occupancy of the fort.

A higher number of builder's hardware was also present in the officers' quarters. This suggests that either the officers' quarters had more architectural amenities or else these items were taken from the soldiers' quarters after the fort closed, thus eliminating them from the archeological record.

Canned goods certainly played an integral part of the commissary and sutler's stores, especially after the Civil War when canning techniques had been improved. The remains of food cans within the excavated rooms of the soldiers' quarters indicate that canned foods supplemented the soldiers' diet. Likewise, the high percentage of can fragments and the greater variety of foodstuffs represented indicate that canned goods played a significant role in an officer's diet. This fact also attests to the higher economic status of officers since canned goods were relatively expensive on the frontier (Wooster 1987).

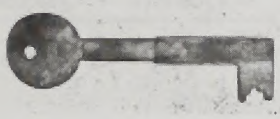
The dearth of items of a personal nature recovered from the soldiers' quarters may reflect the apparently low economic status of the enlisted men, who probably possessed very little which could contribute to the archeological record. It may also indicate that soldiers took better care of personal items than officers did, and took these items with them when they left the post.

The personal items recovered in the officers' quarters outnumber those from the soldiers' quarters 6:1 and represent both adults and children. From these artifacts we get a picture of leisure-time entertainment, children's activities, and women's activities. As with the higher percentage of canned goods, these personal items also reflect the distinction between officers and enlisted men. ✠

Chapter 18

CERAMIC ARTIFACTS

Charles M. Haecker, Harding Polk II, & Peggy A. Gerow



THE EXCAVATIONS CONDUCTED in the various areas of Fort Craig yielded 679 ceramic artifacts. The assemblage is dominated by fragments of Euroamerican wares (Table 18.1), most were assigned to the household/mess functional category (Table 18.2). Other artifacts include portions of pipes, toys, and bricks. Several fragments of local native wares and prehistoric sherds are also present.

EUROAMERICAN WARES

Euroamerican wares represent more than 90% of the ceramic assemblage. Four different ware types were identified: refined earthenware, porcelain, stoneware, and coarse earthenware (Table 18.3). Most of the ceramics are tableware fragments (Table 18.4).

Historical Background

Refined Earthenware

Refined earthenwares include wares such as whiteware, ironstone, semiporcelain, and yellowware. This ware category is the most common with 550 fragments.

One of the disconcerting aspects of historical period ceramic analyses is the disagreement among researchers on the differentiation between whiteware, ironstone, and semiporcelain. Some analysts (e.g., Gates and Omerod 1982:7) use whiteware as a generic term to denote any type of pottery or porcelain that is white or nearly white in color. Consequently, the softer-paste whiteware variants are lumped together with the thick-walled white ironstones and, usually, the thin-walled and vitreous semiporcelains. Other researchers such as Price (1979) and Lofstrom et al. (1982) distinguish between these ceramic types and classify them as separate, major ware categories. This categorization, though, implicitly assumes that there is universal agreement among analysts as to the proper assignation of white refined earthenwares from a given collection. Such agreement often is not achieved, however. It is therefore necessary to provide brief summaries of whiteware, ironstone, and semiporcelain.

Whiteware. White-paste earthenwares, or whitewares, are the most enduring of the wares of the creamware-pearlware-whiteware triad and represent a point along the continuum of eighteenth- and nineteenth-century

Table 18.1. Distribution of Ceramic Artifacts

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Euroamerican	69	93	34	390	27	613
Smoking Pipes	13	15	3	2	3	36
Doll	—	—	2	1	1	4
Marble	—	—	1	—	—	1
Oven Bricks	—	5	—	—	—	5
Local Wares	—	—	—	9	—	9
Prehistoric	1	4	—	6	—	11
Total	83	117	40	408	31	679

Table 18.2. Distribution of Ceramic Artifacts by Functional Categories

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Household/Mess	18	48	25	86	21	198
Indulgences	23	17	3	11	3	57
Architecture/Construction	—	5	—	—	—	5
Communication	14	—	—	—	—	14
Personal	—	—	3	1	1	5
Furniture	1	—	—	8	—	9
Prehistoric	1	4	—	6	—	11
Indeterminate	26	43	9	296	6	380
Total	83	117	40	408	31	679

Table 18.3. Distribution of Euroamerican Ceramics

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital*	Old Hospital	Total
Refined Earthenware	33	88	30	361	24	546
Stoneware	30	3	—	13	—	46
Semiporcelain	4	2	4	13	1	24
Porcelain	—	—	—	—	1	1
Coarse Earthenware	2	—	—	—	—	2
Yellowware	—	—	—	3	1	4
Total	69	93	34	390	27	613

* Most are from the surface collection and the trash dump.

refinements in paste and glaze. The development of whiteware and a lead-free glaze, along with the use of a wider range of colors, occurred ca. 1820–30. Most whitewares after 1840 are almost pure white, closely approximated by Munsell 10Y 9/1, an extremely pale yellow. Unlike the earlier lead glazes used on pearlwares, the post-1840 whitewares used lead-free alkaline glazes that exhibited less crazing and were less susceptible to wear and flaking than the lead glazes (Lofstrom et al. 1982:8). Ketchum (1983:12) notes that whiteware, like yellowware, was produced in molds, and tableware was the most common product.

Ironstone. When used by historical archaeologists analyzing nineteenth-century collections, ironstone refers to a ware that is intermediate between the softer-paste whiteware and the more vitreous semiporcelain. Ironstone is aptly described by Lofstrom et al. (1982:8) as a "thick, heavy, hard earthenware exhibiting a cold, grayish color." The task of separating whiteware from ironstone is not always simple, however. For example, measurements of paste hardness on a single vessel can vary widely. In addition, as certain whitewares became more refined toward the end of the nineteenth century, vessel hardness often approached that of ironstone.

Table 18.4. Distribution of Euroamerican Ceramics by Identifiable Vessel Form

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital*	Old Hospital	Total
Plate	5	8	6	33	7	59
Bowl	4	17	2	10	2	35
Cup	3	1	6	16	2	28
Saucer	—	2	1	4	—	7
Jar	—	20	—	10	—	30
Jar lid	—	—	1	4	—	5
Chamber pot	1	—	—	3	—	4
Vase	—	—	—	5	—	5
Bottle	26	2	—	6	—	34
Jug	—	—	—	3	—	3
Butter dish insert	—	—	—	—	1	1
Candy dish	1	—	—	—	—	1
Serving bowl	—	—	—	—	2	2
Mixing bowl	—	—	—	—	1	1
Pitcher	1	—	—	—	2	3
Total	41	50	16	94	17	218

* Most are from the surface collection and the trash dump.

Ironstones often appear undecorated and should be viewed apart from the cream-colored wares that are a variant of the softer-paste whiteware body with no decorations (Lofstrom et al. 1982:10). Miller (1980:3) notes that the distinction between plain white ironstone and undecorated cream-colored vessels is significant in economic terms, as the ironstone vessels were higher priced.

Collard (1967) defines two distinct phases in the history of ironstone applicable to its distribution on the frontiers of North America. The first type of ironstone was a finer, dense earthenware developed to compete with Oriental porcelain. It was relatively costly, more showy, and a limited-access, high-status ceramic (Collard 1967:125). After 1850 the second type of ironstone was developed by the potteries of Staffordshire, England, as a response to the influx of inexpensive, hard-paste porcelains from France. These wares were generally heavier and were advertised as suitable for the "country trade." It was this style that became ubiquitous in frontier households (Collard 1967:125–130, 132). Also after 1850, ironstones were either left plain or embellished with unpainted, molded geometric, foliate, or floral motifs. The blue-gray tint of the early ironstones gave way to a whiter tint that simulated the gray-white of French porcelain.

A number of British potters used names that suggested ironstone was a type of porcelain: for example, "opaque porcelain," "demi-porcelain," and such French names as "porcelain de terre" (Godden 1964:231). No other ware had so many synonyms. In addition to the obvious "ironstone china," popular variants included "white granite," "hotel ware," and "stone china," often with several of the names combined in one piece (Collard 1967:131; Ramsey 1947:153).

By the late 1800s heavy ironstones became outdated. Collard (1967:135) notes that contemporary American writers on ceramic tastes began equating ironstone with lower-class status. Between ca. 1850 and 1900 there was a shift from heavier, plain or embossed-edged ironstones to lighter-weight, embossed ironstones with more delicate floral or abstract motifs.

Semiporcelain. Soft paste porcelain, or semiporcelain, is also one of the popular nineteenth-century generic whitewares. It is formed by adding ground glass and other additives to the clay body. The resulting vessel has an impermeable white paste but lacks the translucent quality of true porcelain. Semiporcelain has been in production since 1820, although its major popularity wasin the second half of the nineteenth century.

Permeable ironstone and impermeable semiporcelain can be difficult to distinguish, especially once lighter-weight ironstone vessels came into vogue. For this reason some analysts categorize semiporcelain as a type of ironstone. Semiporcelains of the late nineteenth century are usually, but not always, thinner walled than ironstones of the same period. They also have a relatively glassy appearance in cross-section when compared with the less-vitreous ironstone. Semiporcelains had a higher status than ironstone because of their greater cost.

Yellowware. Yellowware is a type of refined earthenware made from a variety of fine clays that fire from a light to dark yellow. The process of manufacturing refined yellowwares was introduced to the United States from Europe around 1830. New Jersey and Ohio pottery factories had a substantial industry manufacturing yellowwares, with later factories begun in other parts of the Midwest by the mid-nineteenth century. Yellowwares are not porous; however, they were often coated with a clear alkaline glaze to accentuate the yellow paste body. Yellowwares are almost always molded. Decoration, if any, is minimal, consisting of molding, annular lines, or blurred splotches. Yellowware vessels were primarily used for food preparation or storage but also include some serving dishes, dinnerwares, and chamber pots. Yellowware was manufactured in some abundance well into the twentieth century, although few vessels were manufactured after 1940 (Ketchum 1983). Four fragments of yellowware were recovered during the Fort Craig excavations.

Porcelain

Porcelain is made from a fine clay incorporating feldspar, silica, and kaolin. It is fired to a very high temperature. Hard-paste porcelain is white, vitreous, and translucent. Porcelain vitrifies to the point where the distinction between the glaze and the body is hard to determine. Since it is very hard and strong, many porcelain vessels are thinner and finer than other ceramics. Bisque porcelain (unglazed after first firing) can be decorated with underglazes, overglazes, lusters, enamels, and gilding and then refired one or more times. Porcelain tends to be more expensive than other wares because its production is more elaborate and difficult. Only one porcelain vessel fragment was recovered, from the old hospital.

Stoneware

Stoneware is highly fired, dense, and nonabsorbent. Most stonewares are somewhat vitrified and do not require a glaze to be watertight, although glazing was usually done to provide added strength. Paste color ranges from reddish brown to gray. Stonewares were most often used during the nineteenth century for storage vessels and bottles. Forty-six stoneware fragments came from the excavations at the front gate, the enlisted men's quarters, and the new hospital.

Coarse Earthenware

Coarse earthenware is made from a number of clays found almost worldwide and throughout North America. Because of the ready availability of material and the relatively simple production methods, they are generally the most inexpensive type of pottery available. Earthenware paste is low-fired, porous, and absorbent (nonvitreous). Because of their low firing temperatures, coarse earthenware vessels have a tendency to chip and break easily. To make them waterproof earthenwares often have a clear lead glaze or, in the case of majolica, delft, or faience, an opaque tin glaze. The color of the paste is highly variable and is dependent on the mineralogic inclusions, firing temperature, and firing conditions. Vessel forms are usually utilitarian, including for storage. However, vessel forms also include tobacco pipes, flowerpots, decorative tiles, roofing tiles, and bricks (Côté 1987:159; Herskovitz 1978:96; Ketchum 1983:18). Two pieces of coarse earthenware came from the excavations in the vicinity of the front gate.

The Fort Craig Euroamerican Assemblage

The Front Gate

Sixty-nine Euroamerican sherds were recovered from the excavations in the vicinity of the front gate (Table 18.5). The apparent low ceramic count, only 2.2% of the total artifacts recovered, is a reflection of the differential aspects of artifact breakage or fragmentation rather than an indication of the relative importance of ceramics. Certainly ceramics were utilized at Fort Craig in a wide range of activities, as is noted for other, contemporary forts (Brose 1967; Herskovitz 1978).

The sherds were recovered from the excavations in portions of the south guardhouse as well as inside and outside the front gate. A comparison of the assemblages from these tested areas suggests no significant differences in either the variety of ceramic wares or the relative abundance of sherds.

Refined earthenwares (33 sherds) represent 48% of the total sherd count. All of these sherds are molded and have a clear alkaline glaze, typical of this ware. Only three exhibit surface decoration. The absence of decoration is typical of whitewares manufactured after ca. 1860 and into the early twentieth century. The 1854–1885 military occupation of Fort Craig corresponds with this period of preference for plain whitewares.

One of the decorated whiteware sherds has a green transfer design of an indeterminate pattern. Transfer print designs were most popular during the first half of the nineteenth century, with green underglaze transfer designs first being introduced during the 1820s. This single transfer decorated sherd may represent an heirloom piece, albeit not especially old at the time of breakage and deposition.

Other identifiable whiteware forms include sherds from cups (3), bowls (3), plates (5), a pitcher (1), and a chamber pot (1). One plate sherd has a portion of a hallmark that is identified as "New Wharf Pottery, England." The design of this particular hallmark dates to 1878–1894 (Kovel and Kovel 1986:94k), within the time frame of the occupation of Fort Craig.

Four semiporcelain sherds were recovered. Two of the sherds from the same vessel have an overglaze green paint band, tentatively identified as part of a decorative molded candy dish. The other two semiporcelain sherds could not be identified as to vessel type.

It is likely that semiporcelains found at Fort Craig would have been deposited either toward the end of its existence as a military post or else during the civilian occupation. The presence of a distinctly nonmilitary object like a candy dish is not that unusual at a military post when one considers that high-status ceramic vessels, such as tea services, were utilized by officers' wives (Brose 1967:69).

In all, 30 stoneware sherds were recovered from the front gate/guardhouse. The identifiable stoneware vessel types are ink and beverage bottles. The inkbottle sherds (18 fragments) have a reddish brown paste with a brown slip and a salt glaze. One of the inkbottle sherds has the impressed mark of J. Bourne and Son and was made for ink of P. and J. Arnold, a London firm founded in 1862 (Devner 1964:45).

The five beverage bottle fragments are characteristic of those manufactured during the latter half of the nineteenth century. They have a brown or tan slip on the top half and a white slip on the bottom half with a clear alkaline glaze. All such beverage bottles had cork closures that were made to be wired shut. The contents of these bottles were probably beer and/or ale—most likely ale, since it does not spoil as quickly as beer and can better withstand heat and cold. Ale was the more common alcoholic beverage on the Western frontier (Switzer 1974:9).

The Soldiers' Quarters

Ninety-three fragments of Euroamerican ceramics were recovered from the soldiers' quarters (Table 18.6). Two of the four basic types of ceramic wares are represented: refined earthenware and stoneware. True porcelain is not represented in this assemblage. Most of the ceramics pertain to the serving of food; a few sherds pertain to beverage storage.

Table 18.5. Euroamerican Wares from the Front Gate

Ware	Vessel Form	Design/Description	Period	No. of Sherds	Location	Comments
S	bottle	none/brown glaze	1800s	1	SU 2	probable ink bottle
RE	bowl	molded/clear glaze, white	late 1800s	1	SU 2	
S	bottle	none/tan glaze	late 1800s	1	SU 1	probable ale or stout bottle
S	bottle	none/brown glaze	late 1800s	1	SU 2	
RE	cup	black transfer, leaves, branches	late 1800s	1	SU 2	
S	bottle	none/brown glaze	late 1800s	6	SU2	probable ink bottle
S	bottle	none/white and tan dipped glaze	late 1800s	1	SU 2	probable ale or stout bottle
RE	unknown	black transfer/maker's mark		1	SU 2	POTTE—GLAND
RE	cup	none/clear glaze, white	late 1800s	1	SU 2	may join w/FS 448
RE	plate	none/clear glaze, white	late 1800s	1	SU 2	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
S	bottle(?)	none/brown glaze		1	Front	
RE	unknown	none/clear glaze, white	late 1800s	2	Front	
S	unknown	none/glaze: int. orange, ext. brown		1	SU 1	
RE	plate	none/clear glaze, white	late 1800s	2	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
S	bottle	none/brown glaze	late 1800s	1	SU 2	
RE	chamber pot	none/clear glaze, white	late 1800s	1	SU 2	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
S	bottle	none/brown glaze	late 1800s	1	Front	probable ink bottle
RE	plate	none/clear glaze, white	late 1800s	1	Front	slight bluish tint to glaze
RE	bowl(?)	none/clear glaze, white	late 1800s	1	Front	
S	bottle(?)	none/grey-white glaze		1	Front	
S	bottle	none/tan glaze	late 1800s	1	Front	ale or stout bottle mouth
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	vase/pitcher(?)	molded/clear glaze, white	late 1800s	1	Front	vertical molded panels, outward flared rim
SP	unknown	none/clear glaze, white	late 1800s	1	Front	
SP	candy dish(?)	overglaze greenish paint, clear glaze		2	SU 2	outward flared rim
RE	unknown	none/clear glaze, white	late 1800s	1	SU 2	
S	bottle	none/brown glaze	late 1800s	1	SU 2	probable ink bottle
RE	cup(?)	none/clear glaze, white	late 1800s	1	SU 2	
S	bottle	none/brown glaze	late 1800s	2	SU 2	probable ink bottle
S	bottle	none/white, tan glaze	late 1800s	1	SU 2	probable ale or stout bottle
RE	unknown	transfer/clear glaze, white	late 1800s	1	SU 2	extremely thin body
RE	plate	none/clear glaze, white	late 1800s	1	Front	
S	bottle	none/white, tan dipped glazes	late 1800s	1	Front	probable ale or stout bottle
S	unknown	none/black glaze		2	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
S	bottle(?)	none/brownish-red glaze		1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
CE	bowl(?)	none/buff with pink firecloud, no glaze		1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
S	bottle(?)	none/brownish-red glaze		1	Front	
S	bottle(?)	none/brownish-red glaze		1	Front	
S	bottle	none/brown glaze	late 1800s	1	Front	probable ink bottle
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
RE	unknown	none/clear glaze, white	late 1800s	1	Front	
SP	unknown	none/white	1800s–1900s	1	Front	
CE	bowl	molded/no glaze	1800s	1	Front	
S	bottle	none/brown glaze	late 1800s	1	SU 2	probable ink bottle
RE	unknown	annular black band/clear glaze	1800s	1	SU 2	
RE	unknown	molded/brown glaze	1800s	1	SU 1	
S	unknown	none/brown glaze	1800s	1	SU 2	
S	bottle(?)	none/brown glaze	late 1800s	1	SU 2	probable ink bottle

RE = Refined Earthenware; S = Stoneware; SP = Semiporcelain; CE = Coarse Earthenware

Table 18.6. Euroamerican Ceramics from the Soldiers' Quarters

Study Unit	Type	Vessel Form	Design/Description	No. of Sherds	Comments
5	RE	Unknown	None	2	
	RE	Jar	None	19	Slip-on lid type, burned
	RE	Jar	None	1	Possibly same as above (FS 633)
6	RE	Plate/saucer	Willow pattern	1	Rim fragment
	RE	Unknown	None	1	⅛" thick
	RE	Bowl	None	1	Rim, 3/16" thick
	RE	Unknown	Flow Blue	1	5/16" thick
	RE	Bowl/mug	Molded sprig	1	Slightly flared rim; 5" diameter, 3" deep, 3/16" thick
	RE	Unknown	None	1	⅛" thick
	RE	Plate	None	1	Rim, 3/16" thick
	RE	Bowl	None	1	Unusual breakage
	RE	Bowl (?)	2 Green raised banded-ware bands, 1 blue	2	
	RE	Unknown	None	1	
	RE	Bowl	None	1	Rim
	RE	Unknown	Blue underglaze	1	
	RE	Plate	None	1	Rim
	RE	Unknown	None	1	
7	RE	Unknown	None	1	
	SP	Cup (?)	Faint mold line near interior rim	1	Outflaring rim; ⅛" thick; "quality fragment"
	RE	Unknown	Flow blue	1	
8	RE	Unknown	Flow blue	1	
	RE	Bowl (?)	Molded band	1	
	RE	Bowl (?)	Flow blue	6	
	RE	Bowl (?)	Banded ware, blue band; underglaze	1	3/16" thick
	RE	Unknown	None	1	
	S	Bottle	None	1	Albany slip
	RE	Unknown	None	1	
	RE	Plate/platter	Flow blue	1	Dark shades of blue
9	RE	Unknown	None	8	
	RE	Bowl	None	1	Base
	RE	Plate	None	1	Rim
	RE	Unknown	Flow blue	1	
	RE	Unknown	Green underglaze, hand-painted	1	
	RE	Unknown	None	3	
	RE	Unknown	None	1	
	RE	Unknown	None	2	
	RE	Unknown	Blue band, underglaze near rim	1	Rim
	RE	Plate	Molded, fluted rim	1	
	RE	Plate	Scalloped rim	1	Bluish glaze along rim
	RE	Unknown	None	7	
	RE	Bowl	None	2	Yellowware
	S	Bottle	None	1	Albany slip
	S	Unknown	None	1	
	RE	Plate/saucer	Flow blue (?)	1	Rim
	RE	Unknown	Blue underglaze	1	
11	RE	Unknown	Blue transfer	1	
	RE	Plate	None	1	Rim
	RE	Unknown	Blue glaze	1	Possibly Flow blue
	RE	Plate/saucer	Blue feather edge	1	Rim; "Decadent" feathering
	SP	Unknown	None	1	
	RE	Unknown	Blue transfer	1	
12	RE	Plate	Willow pattern	1	Rim

RE = Refined Earthenware; SP = Semiporcelain; S = Stoneware

By far the most common ceramic type recovered is white refined earthenware, or "whiteware" as it is commonly termed. This ware is defined as having an opaque white or cream-colored body, a granular fracture, and the tendency to absorb some moisture. Variations of whiteware that are often found in late-nineteenth-century contexts include the more vitrified white granite or "hotel ware" and semiporcelain. However, within the rooms and trash dump excavatedat the soldiers' quarters, virtually all of the whitewares appear to be of the less vitreous, more absorbent type. Only two examples of semiporcelain whiteware were recovered.

All of the plain whitewares are of the white-tinted variety. This variety was very popular beginning around 1850 and reached its peak in popularity by the 1880s. It is believed to represent an attempt by British and American pottery manufacturers to imitate and compete with the white French porcelain that had come into vogue at that time (Collard 1967:130). However, by around 1890, plain and molded design whitewares began to lose favor among the more discriminating Victorians, although such whitewares were still manufactured well into the twentieth century.

Two molded design, unpainted whiteware plate rims were recovered from the trash dump (SU 9), one with a scalloped edge and the other with a fluted or ribbed edge pattern. Such general patterns are identified by Weatherbee (1980:103) as having been most popular during the 1860s–1880s. Also recovered was a fragment of a whiteware bowl or cup with a molded sprig design. Various molded patterns of sprigs of branches and flowers were introduced by British and American manufacturers during the 1860s–1890s (Weatherbee 1980).

One molded, feather-edged whiteware plate fragment was recovered in a room associated with the bakery (SU 11). Edge-decorated flatwares were first introduced during the 1780s, becoming most popular during the first half of the nineteenth century. This particular pattern is typical of edgewares manufactured after ca. 1840, when the painting on the rim design was more or less haphazard compared with those edgewares manufactured during this ware's earlier period of popularity.

Painted whitewares include the "flow blue" and "willow pattern" decorative motifs. The willow pattern, a transfer method of design, was introduced during the 1780s, reaching its peak in popularity during the first quarter of the nineteenth century. This pattern continued to be manufactured throughout the nineteenth century, however, and in fact the same patterns of 150 years ago are still being manufactured today.

Flow blue was introduced around 1840, the same time that the willow pattern began to lose its status value. Flow blue reached its peak in popularity during the last quarter of the nineteenth century, extending into the twentieth century in some regions of the United States (Robacker and Robacker 1978:108). Flow blue is a design motif that consists of transfer and sponge-applied patterns which were intentionally blurred in the kiln by the use of a chlorinating vapor. The two flow blue sherds found in the soldiers' quarters are of a transfer design pattern that was manufactured in the Staffordshire, England, pottery district.

Three refined yellowware fragments, all having a clear lead glaze, came from the trash dump (SU 9). Two are bowl fragments; the third could not be identified as to vessel form but more than likely is from a bowl.

Two fragments of a stoneware Bristol glaze bottle were recovered, one from the bakery and the other from the trash dump. Similar bottle fragments were found during the 1990 field season, in the vicinity of the guardhouse. This type of stoneware bottle is believed to have contained ale. An additional stoneware fragment exhibiting a brown paste color also came from the trash dump but its function is unclear.

The vessel form categories in this assemblage are flatware (including plates and saucers) and hollowware (including bowls, cups, jars, and bottles). The great majority of sherds are from vessels intended for food consumption; none appear to represent food preparation.

The Officers' Quarters

Thirty-four Euroamerican ceramic fragments were recovered from the excavations within the officers' quarters. Only one of the major ware groupings, refined earthenware, is represented in this assemblage. This

grouping consists of whiteware, ironstone, and semiporcelain.

Ware types of sherds from 23 vessels were identified—17 (74%) ironstone, three (13%) semiporcelain, and three (13%) whiteware. Five sherds could not be identified as to vessel type (Table 18.7). Represented vessel shapes are five dinner plates, one cup saucer, six coffee/tea cups, one possible punch cup, one possible vase, and four bowls. All but one of these vessels indicate food consumption activities; none represent food preparation.

One of the plates is a whiteware exhibiting a "marbleized" pattern of the sponge decoration method. Robacker (1978:26) notes that this pattern was popular during the final third of the nineteenth century. The other two dinner plates, as well as two cup saucers, are plain white ironstone lacking a molded design. One of the ironstone plates has a lion-unicorn maker's mark design attributed to Bridgwood and Clark, Staffordshire. This British company was in business from 1857 to 1864 (Kovel and Kovel 1986:195). By 1891, when American law first required imports to be marked with the country of origin, most Staffordshire potters had forsaken the production of cheap white ironstone except for the thick-bodied ironstone as is represented by this plate. By this time British pottery factories were mostly engaged in perfecting semiporcelain bodies owing to the greater price such higher-status wares could command in the American market (Weatherbee 1980:109).

Table 18.7. Euroamerican Wares from the Officers' Quarters

Study Unit	Type	Paste Color	Vessel Form	Design/Description	No. of Sherds	Comments
13	IR	White	Plate or soup bowl	Plain white	1	
	IR	White	Unknown	Plain white	1	
	IR	White	Tea/coffee cup	Plain white	1	Has handle, no maker's mark
	IR	White	Cup	Plain white	5	Represents two different cups
	IR	White	Cup	Plain white	3	No maker's marks, same cup
	IR	White	Plate	Plain white	1	
14	IR	White	Mug or punch cup	Plain white	2	Measures 3" deep, est. diameter of 3"; no handle
15	SP	White	Bowl	Plain white	1	Rim, thin-walled
	IR	White	Plate	Plain white	1	Maker's mark Bridgwood & Clark, Staffordshire [1857–1864], matches FS 764
	IR	White	Jar lid (?)	Plain white	3	Almost a complete vessel measuring 2.6" diameter with ½"-high straight shoulders
	IR	White	Unknown	Plain white	1	Semicircular with 2.2" diameter, split laterally
	WW	White	Plate	Black and grey sponge	1	Marbleized variant
	SP	White	Bowl (?)	Plain white	1	Flared rim, thin-walled
	WW	White	Unknown	Green & black underglaze	1	Handpainted
	WW	White	Unknown	Blue underglaze	1	Handpainted
	IR	White	Saucer or jar lid	Plain white	1	
	IR	White	Unknown	Plain white	2	Body fragments
17	IR	White (?)	Unknown		1	Discolored by fire
	IR	White	Tea/coffee cup	Plain white	1	Rim
	SP	White	Plate	Plain white	1	Rim
	WW	White	Unknown	Plain white body	1	
	IR	White	Plate	Plain white	1	Maker's mark matches FS 722
	IR	White	Unknown	Plain white	1	Body fragment
	SP	White	Vase or cup	Plain white	1	Rim, 6- or 8-panelled

IR = Ironstone; SP = Semiporcelain; WW = Whiteware

Two of the four cup fragments are plain white ironstone, a third is a plain whiteware, and the fourth is semiporcelain, the latter exhibiting a six- or eight-sided mold decoration. The ironstone cup fragments are unmarked. Many retail orders for white American ironstone specifically requested that the table services not have maker's marks, since American ironstones were considered inferior to their British competitors. Apparently the owners of such pottery did not want the social stigma of such lower-status marks overtly conferred upon their table service. By the late 1800s, however, American ceramics were considered the equals of the British, after which maker's marks on American-made ceramics were proudly displayed (Weatherbee 1980:134).

Included in the ceramic collection from the officers' quarters are three underglaze painted whiteware sherds. These artifacts are too small to identify vessel form or decorative pattern.

The New Hospital

The 390 Euroamerican ceramics recovered from the new hospital represent four different ware types—whiteware, semiporcelain, yellowware, and stoneware. The whiteware category consists of plain white, molded, and decorative, with the majority being plain white. Decorative includes annular ware, spongeware, feather edge, colored glaze, and transferware (Table 18.8). Only 94 of the fragments could be identified as to vessel form (Table 18.9). Tablewares constituted the bulk of the assemblage; no serving vessels were present. Most of the fragments came from the surface collection (SU 24) and the trash dump (SU 25) and not from within the hospital proper.

Of the 24 fragments exhibiting decoration, annular ware predominated with nine pieces. Annular ware, also termed dipped, banding, or slip-banding, refers to a technique used to apply horizontal bands or

Table 18.8. Distribution of Euroamerican Ceramics from the New Hospital

	Study Unit							
Type	21	22	23	24	25	26	28	Total
Whiteware, plain	13	11	16	188	77	—	—	305
Whiteware, molded, decorative*	3	—	6	28	18	—	1	56
Semiporcelain	—	—	2	5	6	—	—	13
Yellowware	—	—	—	2	1	—	—	3
Stoneware	3	—	—	4	5	1	—	13
Total	19	11	24	227	107	1	1	390

* Consists of annular ware, spongeware, feather edge, colored glaze, transferware

Table 18.9. Distribution of Identifiable Vessel Forms from the New Hospital

	Study Unit							
Type	21	22	23	24	25	26	28	Total
Plate	1	1	1	18	12	—	—	33
Bowl	1	—	—	7	2	—	—	10
Cup	1	2	1	3	9	—	—	16
Saucer	—	—	—	2	1	—	1	4
Jar	1	—	2	7	—	—	—	10
Jar lid	—	—	—	1	3	—	—	4
Chamber pot	—	—	1	2	—	—	—	3
Vase	1	—	2	1	1	—	—	5
Bottle	2	—	—	2	1	1	—	6
Jug	—	—	—	—	3	—	—	3
Total	7	3	7	43	32	1	1	94

stripes of colored slip usually to hollow vessel forms such as mugs, bowls, cups, and covered dishes. The bands have a slight relief instead of a flat, painted-on decoration. When poorly applied, the bands or stripes may pull away from the body. Through time, wider bands were often applied, and preferred colors changed from duller browns, yellows, greens, blues, and blacks, to brighter colors such as bold blues, yellows, and white upon which narrow bands of white or black were applied (Majewski and O'Brien 1987).

The majority of annular-decorated nonvitreous earthenwares was produced in England from about 1790 through the early twentieth century as an inexpensive ware for both local use and export (South 1977). Some annular wares were manufactured in the U.S. by about 1850. Miller (1980:34) places banded ware in his next-to-lowest price category.

The nine annular ware fragments recovered from the new hospital excavations had stripes of blue, blue/white, black, black/brown, brown/white, black/white, and blue/white with a broad gray band. Four of these fragments were of an unidentifiable vessel form, three were from cups, and two were from bowls.

The other decorated fragments consisted of six transfer print, five flow blue, two blue-edged, and two feather-edged. These pieces and the annular ware are all suggestive of a pre-1860 assemblage, suggesting deposition during the early years of the fort.

None of the basal portions exhibits maker's marks, which suggests that the vessels are relatively inexpensive. It could also mean that these are seconds and thus do not have maker's marks owing to their poor quality.

The Old Hospital

Twenty-seven Euroamerican wares were recovered from eight different rooms in the old hospital complex. Of these fragments 21 sherds can be identified as food-related vessels, and 6 were unidentifiable (Table 18.10). Within the food-related category, the 21 sherds represent a minimum of 17 vessels. This category includes tableware, food serving, and food preparation. Within those subcategories, eleven vessels (15 sherds) are identified as tablewares, five vessels (5 sherds) are for food serving, and one vessel (1 sherd) is for food preparation.

The vessel forms identified within the tablewares are plates (minimum number of individuals [MNI] = 7), cups (MNI = 2), and bowls (MNI = 2). The vessel forms identified within the serving dishes are a platter, a bowl, two pitchers, and a butter dish, each vessel being represented by a single sherd. Within the food preparation category is a single small sherd, probably from a mixing bowl.

The tablewares are composed of ironstone and whiteware. The ironstone vessels are four plates (7 sherds) and one bowl (1 sherd). The whiteware vessels are three plates (3 sherds), one bowl (1 sherd), and one cup (2 sherds).

The ironstone dishes are plain white with very minimal molded decorations. One small fragment of a plate rim exhibits molded surface treatment on the upper surface near the rim. Another plate fragment shows a faint trace of ribbing near the rim.

The whiteware vessels, on the other hand, show a variety of decoration, including a blue transfer-printed floral motif on a plate, glazed blue feather edging on another plate, and blue glazing with an unglazed white stripe on a bowl (Figure 18.1). Miller (1989) identifies unscalloped and unmolded English shell-edged whitewares as dating to the decade between 1874 and 1884.

One very small (9 mm by 12 mm) whiteware sherd was determined to be from a plate because it is very flat and shows extensive wear marks on its upper surface. A partial maker's mark on the reverse side suggests it was from the central portion of the plate, which would have experienced the most wear.

The serving vessels are composed of ironstone, whiteware and semiporcelain. The serving dishes are a shallow oval platter, a small deep bowl, a large pitcher, two small pitchers, and a butter dish. Each vessel was represented by a single sherd except for the bowl, which was whole (Figure 18.2). The 1902 Sears, Roebuck Catalogue (1969:788–798) identifies this size platter and bowl as for serving vegetables. Herskovitz (1978:96) recovered fragments of similar dishes from Ft. Bowie. He also identified it as a "baker" and stated

Table 18.10. Euroamerican Wares from the Old Hospital

Study Unit	Type	Vessel Form	Design/Description	No. of Sherds	Comments
29	WW	Bowl	Exterior pale blue with white annular band, white interior	1	Rimsherd, 14 cm est. diameter
	WW	Unknown	Plain white	1	Partial maker's mark on base, "Burslem"
	SP	Butter dish trivot	Unglazed, plain white; 16 mm central hole, radiating 5 mm holes	1	Ca. one-third of piece; 10 cm est. diameter
	WW	Unknown	Plain white	1	Body sherd with base, 6 cm est. diameter
	WW	Plate	Debased blue feather edge	1	Rimsherd
	IR	Plate	Plain white	2	Mendable, est. 28 cm diameter
30	WW	Plate	Blue transfer printed floral design interior	1	24 cm est. diameter
	IR	Plate	Plain white	2	Mendable rim and footring, ca. 27 cm diameter
	IR	Unknown	Plain white, molded ribbing	1	
	IR	Serving dish	Plain white	1	Rim and base of oval-shaped, shallow bowl
	YW	Mixing bowl	Yellow	1	
31	WW	Unknown	Plain white	1	
	IR	Plate	Plain white with scalloped rim	2	Ca. 24 cm diameter
	IR	Pitcher	Plain white	1	Body sherd below spout
	IR	Unknown	Plain white with ribbing	1	
32	IR	Plate (?)	Plain white with molded rim	1	
34	IR	Serving bowl	Plain white with scalloped rim	1	Whole dish; "Powell and Bishop Ironstone China"
	IR	Bowl (?)	Plain white	1	
	WW	Unknown	Plain white	1	
	WW	Cup	Plain white	2	Base ring and sidewall, base ring 4 cm diameter
36	PR	Unknown	Hand painted red design with gilding	1	
37	IR	Small pitcher	Plain white	1	Rim, 10 cm diameter, creamer (?)
	WW	Plate (?)	Plain white	1	Partial maker's mark, "MAD(E)"

IR = ironstone; PR = porcelain; SP = semiporcelain; WW = whiteware; YW = yellowware

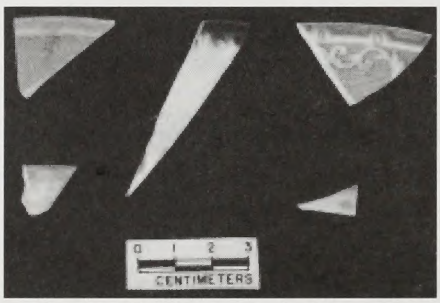


Figure 18.1. *Decorated whitewares from the old hospital.*



Figure 18.2. *Bowl from Room 4 of old hospital.*



Figure 18.3. *Interior trivet for a butter dish.*

that it could be used for either serving or baking. He cites a 1900 price list (Hillcrest Shop n.d.), which shows that they ranged from 5¼ to 11½ inches across. This example appears to be of the larger size.

The butter dish is the single remnant of a semiporcelain vessel. The sherd represents the interior trivet of a three-piece covered butter dish (Figure 18.3). In using this dish, water (preferably cold) would be put in the shallow plate and the butter would be put on the trivet above the water. The cover would help retain the cooler temperature as well as keep flies and dust off the butter.

A single sherd was tentatively assigned to the food preparation category, a yellowware sherd believed to be from a mixing bowl. Although the sherd is relatively small, yellowware was typically used for food preparation. The curve of the sherd and the wear marks on the interior suggests a bowl. The shallowness of the curve suggests a relatively large vessel such as a mixing bowl.

The form or function of six sherds could not be identified. These consist of two ironstone, one porcelain, and four whiteware sherds. Considering that 65% of the ceramic assemblage was used in food preparation, serving, or consuming, it is likely that they were used for similar purposes. Most of these sherds are too small to even hazard a guess at vessel function.

One whiteware sherd represents a straight-walled vessel approximately 6 cm in diameter. While it might be identified as a small liquids container, typical pitcher forms were not straight-walled, nor were most serving or dinnerware dishes. The two ironstone sherds are the largest of the unidentified sherds and indicate complex shapes. However, they were still too small to determine the function. The porcelain sherd was a small (15 by 9 mm) fragment with red overglaze and gilding. Some of the overglaze and gilding have worn off. The sherd was too small to determine vessel form; however, it might be safe to assume that it is from a vessel of fancy imported dinnerware. Herskovitz (1978:101) identified this kind of porcelain at Ft. Bowie and cites Collard (1967) as attributing its production to France after 1850. Similar European wares began to appear in Canada in the 1870s.

Three maker's marks were noted. The whole small serving bowl exhibited the mark of POWELL & BISHOP IRONSTONE CHINA (Figure 18.4). Chaffers's (1930:708) extensive catalog of European pottery marks and monograms only makes passing reference to Powell and Bishop as a pottery manufacturer located in Hanley, Staffordshire, England. They produced decorated china and earthenware. No dates of operation were given, leaving the impression that it was still operating as of 1930 (when the book was published). Godden (1971:83), however, states that the firm was only in operation from 1876 to 1878.



Figure 18.4. *Maker's mark on bottom of bowl.*



Figure 18.5. *English registry mark.*

The second maker's mark is a diamond-shaped English registry mark (Figure 18.5). The sherd contains most of the mark but is missing the upper one-third. Hughes (n.d.:150) indicates that the piece was manufactured in November of 1870. Another portion of the mark indicates that it was made in Burslem, Staffordshire, England. Although only a portion of the manufacturer's name is visible, the mark is virtually identical, even to the date, with the mark found on a hollowware sherd from Ft. Bowie, which is identified as T & R BOOTE (Herskovitz 1978:106). Chaffers (1930:684) identifies Thomas and Richard Boote as establishing the Waterloo Potteries in 1842.

The third mark is on a very small sherd (9 by 12 mm) and contains the letters MAD(E) and some other lines. The Kovels (Kovel and Kovel 1981:1) state that if a piece of pottery indicates its country of origin, then it was likely manufactured after 1914. This mark postdates the occupation of Ft. Craig.

OTHER CERAMIC ARTIFACTS

Bricks

Fragments of five firebricks were collected from the bakery oven remains. Table 18.11 presents a description of these artifacts. Three of the bricks are stamped EVENS & HOWARD/ST. LOUIS MO., a firm established in 1857 by R. J. Howard and John C. Evens, who had purchased a plant in operation since 1862 (Smith 1960). Herskovitz (1978), however, notes that the earliest listing for Evens and Howard in the St. Louis city directory is an 1865 listing of the Evens and Howard Fire Brick Company. In later years this company manufactured sewer pipe, and it stayed in business until at least 1952 (Smith 1960). Bricks from this company have been recovered from other Western forts, such as Fort Bowie and Fort Stevenson (Herskovitz 1978; Smith 1960).

Table 18.11. Description of Oven Bricks

No.	Munsell	Color	Width (in)	Thickness (in)	Texture	Stamp
1	5YR 8/2	Pinkish/white	4½	2 9/16	Coarse/gritty	. . . ARD . . . S. MO
2	5YR 7/6	Reddish yellow	4¼	2 9/16	Coarse/gritty	EV . . . S & . . . LO . . .
3	7.5YR 8/3	Pink	4⅛	2 9/16	Coarse/gritty	. . . NS & HO . . . LOUIS . . .
4	5YR 6/4	Lt. reddish brown	4	2⅛	Fine	
5	2.5YR 6/4	Lt. reddish brown	3⅞	2¼	Fine	

Dolls

Portions of four dolls were recovered—a figurine, an arm, a foot, and a shoulder/back portion (Figure 18.6). The first two came from Room 3 of the officers' quarters, the foot was found in the trash area to the east of the new hospital, and the shoulder/back fragment came from Room 4 in the old hospital complex. This room functioned as officers' quarters and laundresses' quarters.



Figure 18.6. *Doll fragments and ceramic marble.*

The porcelain figurine appears to be a female with shoulder-length black hair and wearing an orange coat or robe with white trim (Figure 18.6c). A white hat sits back on the head. This figure was made from a one-piece mold and is hand-painted. It is broken off at the waist, so its exact height is not known. The fragment measures 1¼ inch long by 1 inch wide at the waist.

The doll's arm is of white porcelain and made from a solid mold (Figure 18.6b). The arm measures 2¼ inches long and has "1¼" stamped on the underside of the proximal end. This end also has a groove for attaching the arm to a cloth or kid body. The fingers are extended and molded together. The manufacturer is unknown.

The small foot fragment is also of white porcelain (Figure 18.6d). It is broken at the knee and measures ⅝ inch in length. No maker's mark is present.

The last fragment represents the portion of the back between the shoulder blades, part of the right shoulder, and a small portion of the right side of the neck (Figure 18.6a). It has a molded ruffled collar suggesting that the doll was a clown figure. Embossed on the lower part of the back was "161_4." Rosalie Purvis, owner and curator of the Doll Museum and Shoppe in Albuquerque (personal communication, 1997), suggests it may be German made and mentioned that Kestnor was one of the prominent German porcelain doll manufacturing companies during the period of Ft. Craig's occupation. Unfortunately, despite the mark, the manufacturer or date of manufacture of this piece could not be determined.

Marble

One china marble was found in Room 3 of the officers' quarters. It measures ¾ inch in diameter and is white with a red leaf design arrayed around the circumference (Figure 18.6e). A three-petal blue flower is painted on the top and bottom. The marble is unglazed and represents a rarity in marble collections. China or porcelain marbles were first produced in the final third of the eighteenth century in Germany; the end date for production unknown (Randall 1971).

Smoking Pipes

Portions of 36 clay smoking pipes came from all five areas investigated at Fort Craig (Figure 18.7). They were manufactured from white, red, and tan clays; all were commercially produced (Table 18.12).



Figure 18.7.
Ceramic smoking pipes.

Table 18.12. Distribution of Smoking Pipes by Clay Type

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
White clay	7	8	2	2	—	19
Red clay	6	6	1	—	3	16
Tan/brown clay	—	1	—	—	—	1
Total	13	15	3	2	3	36

Pipe fragments are typically found at nineteenth-century military posts as well as urban and rural civilian sites in the West (Fontana and Greenleaf 1962; Hardesty 1978; Herskovitz 1978; Humphrey 1969; Wilson and Caperton 1977; R. Wilson 1966). For the enlisted man, the dull and routine duty at the post left him with considerable leisure time, and his pipe and pouch were more than likely close friends (R. Wilson 1966).

White Clay Pipes

White clay pipes are some of the most common types found during this period. While Fort Craig was active, millions of these pipes were made in both Europe and the United States, thereby flooding the market. Prices were so affordable that any person who wanted to smoke a pipe could afford to own several (R. Wilson 1966). At Fort Union, these pipes sold for $0.75 and up (Giese 1969:75).

Nineteen white clay pipe fragments were recovered: three Dublin style bowls (Figure 18.6b, d), nine unknown bowl fragments, one elbow-style pipe bowl and stub stem, one bowl fragment with a molded face, and five stem fragments. All are unglazed.

In the Dublin style pipe the bowl is placed at an obtuse angle to the undetachable stem and a small spur is attached to the base of the bowl. In the Fort Craig assemblage a bowl of this style was found complete but the stem is snapped off directly at the base of the bowl. The body is 1⅝ inch tall with an interior bowl diameter of ⅞ inch. The bore diameter of the stem is 5/64 inch. No manufacturer's mark is present, but the large interior bowl diameter is consistent with the mid-nineteenth-century trend of ca. 2 cm.

The second Dublin style bowl is a basal fragment with a "C" stamped into the spur. A similarly marked spur was recovered at Old Sacramento. The maker of this pipe is unknown (Humphrey 1969).

The last Dublin style pipe fragment is embossed with the letters "COLU . . ." on the stem where it attaches to the bowl. This mark could not be identified as to manufacturer.

The elbow-style bowl fragment measures 1⅜ inch high and is decorated with two small coils encircling the bowl's exterior rim and the edge of the stem's shank (Figure 18.6f). The outer diameter of the stem shank measures 9/16 inch with a pencil-size interior hole. A separate stem, probably of reed, would have been inserted into this hole.

One bowl fragment with a molded face came from the new hospital area (Figure 18.6d). This appears to be a man's face, but only the nose and mouth are present. A mold seam bisects the face.

The nine remaining bowl fragments, two of which fit together, are too small to ascertain their original size and shape. The two fragments that fit together are probably from a Dublin style pipe owing to the alignment of the stem fragment. This stem fragment measures 2⅞ inches long and has a bore diameter of 3/32 inch. No maker's mark is present.

The five stem fragments measure between 1 1/16 and 2⅜ inches long with bore diameters from 1/16 to 3/32 inch. One of fragments comes from close to the bowl and exhibits parallel incised lines extending lengthwise up the side of the stem, but no maker's mark.

Red Clay Pipes

The sixteen fragments of red clay or terracotta pipes consist of one complete bowl with detachable stem shank, fourteen bowl fragments, and a stem shank fragment. Five of the bowl fragments are a molded ribbed

style and one was painted red after firing. The remaining bowl fragments are all nondescript. No maker's marks were evident on any of the fragments.

The complete bowl and stem is a unique figurine design, which does not appear in other collections (Figure 18.6a). The bowl is of a man with a Fu Manchu mustache and wearing a plated type helmet with ear flaps. This bowl measures 1 5/16 inch high with an interior bowl diameter of 15/16 inch. The stub stem is embossed with the top portion of a fish whose mouth is open and exhibits two rows of teeth. This stub has a diameter of ¾ inch, and a detachable stem would have been inserted into the opening. No manufacturer's mark is present.

Tan/Brown Clay Pipes

The last pipe recovered is an unglazed tan/brown clay elbow with a detachable stem (Figure 18.6c). The bowl measures 1½ inch high and has an interior diameter of 1 inch. The exterior of the stem measures 13/16 inch and also would probably have held a reed stem roughly 10 inches in length. This stem could be discarded in favor of a new one when it became clogged (R. Wilson 1961). A small "x" is incised on the bottom of the bowl, but the artifact could not be identified as to manufacturer. Pipes similar to this were recovered at Fort Laramie and are believed to be from the Pamplin Smoking Pipe and Manufacturing Co., Inc., of Pamplin, Virginia (R. Wilson 1961).

LOCAL CERAMICS

Nine locally produced ceramic fragments came from the excavations in the new hospital area. One came from surface collection, seven from the 1 by 1 m units placed in trash area, and the last was from the hallway. Three are thick brownwares with smudged interiors, suggesting they are pieces from a bowl; three are black-slipped jar fragments; and three are unglazed, wheel-turned, cream-colored jar fragments. It appears that a minimum of three different vessels are represented.

The latter three fragments appear to be from a vessel similar to the jar used by Dr. Robert McKay, post surgeon during part of 1869, to make a water filtering system for the hospital. In his autobiography, McKay (1918:26) writes:

> The water supply at Fort Craig was obtained from the Rio Grande river and there were times about June when the snows melted in the mountains that it answered very well to a description I once read of the Missouri river water "Too thick to drink and too thin to cultivate." This was a great bother to us during the summer rise for it was persistent for more than a month. I conceived the idea of making a filter by making a good sized ball of jaspa [jaspe] and charcoal which I held together by mixing a little cotton batting carefully in the mortar and kneeding [sp] it into a very stiff paste. After it hardened I bored a hole in the ball and inserted a rubber tube and then put the ball in a "Tanaja," a large ungalvanized earthen jar holding eight or ten gallons of the muddy water. This jar was put in an army blanket and was swung in the hallway. The jar being porus [sp] would let enough water through to keep the blanket damp, which cooled the water. By swinging another tanaja just below the first and having it blanketed in the same way, and having a rubber tube connecting the two, I had a filter that furnished clear, sparkling, cool water. I put one in the hospital and they became quite the vogue at the post.

PREHISTORIC CERAMICS

Eleven prehistoric ceramics came from the excavations at the front gate, the soldiers' quarters, and the new hospital. Nine were identified as Mogollon brownwares, one was a redware, and the last was Tularosa Black-on-white. Both bowls and jars are represented.

The prehistoric ceramics do not appear to be out of context given the site area. In 1932 H. W. Yeo noted in his report on the archeological survey of Socorro County that Fort Craig may have been built on the site of a prehistoric pueblo. During the stabilization work conducted in 1985, examination of vandals' holes in the commanding officer's quarters revealed the presence of a prehistoric component underneath the building (Gossett and Gossett 1985). This observation further supported Yeo's contention that the fort was built on an abandoned prehistoric village. In September of 1988, the University of New Mexico's Office of Contract Archeology (Gerow 1988) conducted a cultural resources inventory of the Fort Craig Special Management Area (SMA) and documented a prehistoric component situated to the east of the blacksmith shop along the edge of the terrace.

SUMMARY

All the Euroamerican wares recovered from the various proveniences could be related to the military occupation of the fort. Although the usual mess ware for enlisted men consisted of metal implements, inexpensive whitewares were sometimes purchased with company funds. Officers, on the other hand, seem to have used the whiteware dishes in a more regular fashion, especially those who were accompanied by their families. In the late 1880s, though, ironstone ware was commonly issued to companies by the quartermaster's department (Billings 1875; Rickey 1963).

Most of the wares recovered from the soldiers' quarters consisted of vessels and decorative motifs reflective of the more utilitarian, relatively inexpensive (and therefore lower status) end of the spectrum of ceramic types available during the 1860s–1890s. Only one sherd, a fragment of a thin bodied, semiporcelain cup, suggests a higher status. This cup fragment was recovered from the trash dump; therefore, it may not have originated from the enlisted men's quarters.

The presence of a variety of decorated ceramics may seem out of place within the context of enlisted men's quarters. However, these and other decorated ware types have been found on other nineteenth-century military installations (Brose 1967; Herskovitz 1978). One reason for this variety might be that the standardization of ceramics for the enlisted men did not occur until after 1889, when the quartermaster department began issuing articles of tableware and kitchen utensils (Herskovitz 1978:99). Such ceramic wares presumably would have been of a more uniform appearance than what one might find at an enlisted men's mess prior to that year.

Although a small collection, the 34 sherds recovered from the excavations within the east officers' quarters provide some insight as to what type of everyday ceramics might be found in "officer country." Overall, the ceramics are of the everyday variety found within any middle-class home of the late nineteenth century—plain, sturdy, and inexpensive whitewares for the most part, with perhaps a few showy and/or heirloom pieces. Of course, the more valuable "presentation" porcelains and semiporcelains were reserved by Victorians for such special occasions as the tea ceremony and the serving of high-status guests. The absence of porcelain and scarcity of semiporcelain sherds within the officers' quarters does not necessarily mean that such higher status vessels were scarce in this household; indeed, it was almost mandatory for an officer's wife to possess objects that reflected her husband's rank. The expense of high-quality ceramics on the frontier and the difficulty of finding a vessel replacement in the exact pattern meant great care would have been expended toward their protection; thus there was less chance for examples of such vessels to enter the archeological record.

Comparison of the ceramic findings from the officers' quarters and the enlisted men's quarters (Haecker 1992:71–75) indicates that inexpensive and/or sturdy ceramics were most commonly used by both officers and enlisted men. Within the enlisted men's quarters excavated in 1991, virtually all of the ceramics are of the less-vitreous, less-expensive type of whiteware. Several of the specimens exhibited decorative styles that were not in fashion during the occupation of Fort Craig—for example, willow pattern, feather-edged, and banded motifs. Only two examples of semiporcelain were recovered in 1991, and both came from the disturbed trash area behind the quarters. These findings contrast with the assemblage from the east officers' quarters, where the still-fashionable plain white ironstones and more expensive semiporcelains were more common.

Most of the Euroamerican wares recovered from the excavations in the new hospital area came from the trash area to the east of the old hospital. The 26 ceramics recovered from below the floor within the hospital are not significantly different from the wares recovered from the excavations within the two sets of quarters, especially in represented paste types or vessel form. The 16 plain whitewares, 7 molded/decorative whitewares (includes one blue transfer and one annular), and one each of semiporcelain, yellowware, and stoneware reflect a lower-status assemblage. Only one fragment indicates a high-status vessel—a fragment of a semiporcelain vase recovered in the white ward. This may have been brought into the ward by one of the doctors.

One of the research questions posed for the new hospital was whether or not it was built on an earlier trash scatter. Although the two decorative fragments and the yellowware are more indicative of pre-1850 assemblages, the overall time frame of the assemblage found in the stratum below the floor is not necessarily earlier than the total hospital assemblage, in other words, circa 1850–1900. Thus, it is difficult to conclude that the new hospital was constructed on an earlier trash scatter.

Fully 68% of the ware fragments recovered from the old hospital complex had a food-related function, whether for preparation, serving, or consuming. Most of these came from Rooms 4–8, which served as officers' quarters and possibly laundresses' quarters. Quite possibly the ironstone wares represent the "standard issue" mess wares. The presence of finer and imported items suggests personal sets of dishes. Generally, it can be assumed that these belonged to higher-status individuals at the fort (i.e., officers and their wives). These wares would have been the fancy dishes brought out for entertaining or special occasions. Despite the austere conditions, a certain level of civility was expected among the officers and their wives. The decorated ceramics show an attempt to ease the harshness of frontier life.

An interesting insight into the supply networks serving these military outposts should be noted from the two identifiable maker's marks in the old hospital assemblage. Both these marks were virtually identical to those recovered at Ft. Bowie, Arizona, which was occupied during the same time period. We could speculate that the vegetable serving dish (baker) was the same ware. This coincidence implies that the same supplier may have served different military posts in this far-flung region. Perhaps the U.S. Army contracted with certain firms to supply the region or even, in a measure of conformity, the U.S. Army as a whole. It would be interesting to compare ceramic assemblages from a number of military posts from the Southwest to see if they have identical mess wares.

Precise dates for the Fort Craig pipes are almost totally lacking. The manufacture of more elaborate and expensive clay pipes began in the United States around 1860. The common varieties of white clays, however, have been produced in this country since 1820. All the measurable bowl fragments are greater than 2 cm, which is indicative of a mid-nineteenth-century trend. The relative inexpensiveness of the majority of pipes within this assemblage supports the suggested lower economic status of the enlisted men.

Reed stem pipes had a wide distribution and were popular in the mid-nineteenth century. They have been found at Fort Union, New Mexico (R. Wilson 1966:37–38); Fort Laramie, Wyoming (R. Wilson 1961:120, 125); and Point Pleasant, Ohio (Thomas and Burnett 1971:13, 26, 27). Richie (1983:98) reports finding ribbed and faintly ribbed, unglazed, red clay pipes at Fort Walsh, Saskatchewan, which was occupied from 1875 to 1883. He suggests that these pipes were probably made in Ohio, noting that several Ohio pipe-

making firms were making socket-shanked pipes between 1850 and 1880, particularly the Peterson Pottery of Point Pleasant, in operation from 1848 to1880.

Ceramic pipes were used by both officers and enlisted men. Smoking and chewing tobacco were sold to the troops by the subsistence department at cost as provided by G. O. 84, 1878, the amount due for tobacco sold to any enlisted man was deducted from his pay. As stipulated in G. O. 64, 1866, troops were supplied with tobacco once a month at a rate of not more than 16 ounces per man per month (U. S. War Department 1881a:239). Tobacco could also be bought from the sutler's store.

Pipes, too, were either bought from the sutler or made by the soldiers from locally available materials, usually from corncobs or briars. No homemade pipes were found during the excavations, but some have been collected from the fort over the years. According to Dr. Robert Weber of the New Mexico Bureau of Mines in Socorro, many soldiers at Fort Craig made pipes from lumps of pumice (Wilson and Caperton 1977:131). Most of the pipes recovered are typical of the cheaper style of clay pipes sold by the sutler.

The marble, figurine, and doll fragments provide a personal glimpse into the lives of officers and their families. Both the marble and the pieces of the three dolls indicate the presence of children, while the figurine probably belonged to an officer's wife. Marbles and dolls have been found at other frontier posts and appear to have been common toys for children (Hardesty 1978; Herskovitz 1978). ✠

Chapter 19

AMMUNITION

Jeanne A. Schutt, Scott Berger, & Keith Kofford



THE AMMUNITION AND ARMS USED AT FORT CRAIG provide a variety of data to address a number of research issues outlined in Chapter 3. These general research realms include evaluating the economic status of personnel, determining what part the local economy played in supplying the fort, identifying the effectiveness of army shipping, and outlining the role of the railroad in the history of the fort. While a number of these research questions would require data gathered from more extensive excavations, data recovered during the five field seasons have provided information about the availability of new weaponry at this frontier fort, as well as information pertaining to the economic status of personnel and the stratigraphic integrity of deposits in the new hospital.

The excavations recovered 304 bullets, cartridges, and percussion caps (Figure 19.1). No portions of guns were recovered, but review of fort correspondence has documented some of the arms that were used at the fort. The ammunition recovered also provides information about the types of rifles and handguns that were used.

This chapter presents a brief history of the development of weaponry from 1800 to 1900, followed by a description of the ammunition recovered from the excavations. These artifacts are discussed in view of technological developments and chronology at the fort, while providing information about the availability of arms for this frontier military installation. The horizontal and vertical distribution of these artifacts is examined to assess the overall integrity of deposits and to identify potential activity-specific locations within the fort.

Scott Berger and Keith Kofford provided invaluable help in the analysis of the ammunition recovered from the excavations. Information from their letter reports is included in this chapter.

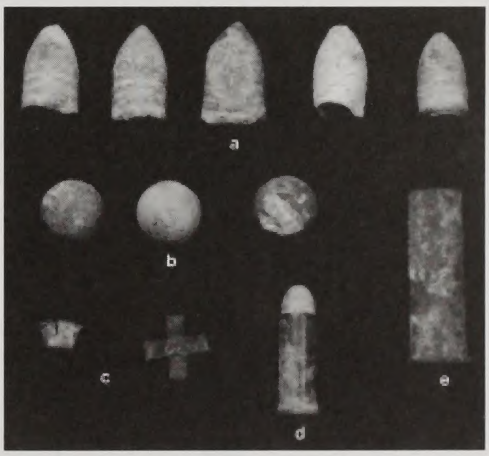


Figure 19.1. *Sample of ammunition recovered from the excavations: (a) Minie balls, (b) 12-gauge round balls, (c) unfired and fired percussion caps, (d) .38-caliber long, (e) .45-70 cartridge.*

THE HISTORY OF WEAPON DEVELOPMENT

Weaponry underwent rapid innovations during the mid and late 1800s. These technological developments required continuous

changes in military regulations, but unfortunately not all installations were equipped with state-of-the-art weaponry.

Prior to the 1800s weapons underwent slow technological change. Smoothbore muskets used round lead balls, providing greater accuracy than the first firearms, which used short arrows, crossbow bolts, and round stones (Barnes 1972:317). The round lead ball remained the primary load for more than 525 years, until the 1800s. Early smoothbore, muzzle-loading rifles (flintlocks) used a flint to ignite the charge. In 1841, the percussion musket was adopted by the military to replace the older flintlock guns. The round ball load was ignited with a percussion cap rather than a flint. This ignition system paved the way for the later transition to metallic cartridges.

These smoothbore guns were carried by foot soldiers and used until the 1850s (Wooster 1987:131). The .54-caliber patched ball was used in the U.S. Common Model 1841 rifle, pre-1842 U.S pistols, and Hall's rifles; carbines used the round ball (J. Wilson 1966b:28). The balls were first manufactured in the 1700s and, although considered obsolete by 1876, they were used until 1900 because of their ready availability and low price (Scott et al. 1989:181). The Colt six-shooter was a cap-and-ball pistol issued in 1849 (Wooster 1987:134). This gun allowed six shots to be fired in rapid succession.

A significant technological innovation occurred with the development of the rifled musket and .58-caliber conical bullet by Claude E. Minie. Despite being available as early as the 1700s, it was not adopted by the United States military until 1855. Although more expensive to manufacture, the hollow-based bullet expanded to fit the rifled bore of the gun, spinning the bullet and resulting in greater accuracy and range. The earlier, smoothbore rifles were converted to the .58 caliber and equipped with a 22½ inch saber-bayonet (Wooster 1987:131). The effective range of a smoothbore rifle was between 100 and 200 yards, whereas rifled weapons had a range of 400 to 600 yards. Rifled arms were the most widely used weapons in the Civil War.

Minie rifles were easier to load than earlier guns but difficult to use under combat conditions. The loading process was complicated and time-consuming. The bullet and powder was first jammed down the barrel with a ramrod. An explosive cap then was placed under the hammer before the gun was aimed and fired (Wooster 1987:132).

Another revolutionary technological advance, which took place during the Civil War, was the development of breech-loading weapons and cartridges. Cartridges or jacketed bullets, developed from 1865 to 1895, replaced the round ball and Minie balls. Breech-loading arms and metallic cartridges improved both accuracy and speed. These jacketed bullets underwent a transition from interior to exterior priming systems, which resulted in tremendous technological advances (Barnes 1972).

The first commercial metallic cartridge produced in the United States was the .22 rimfire short, which was introduced by Smith & Wesson in 1857. The centerfire cartridge was not developed until 1856 and 1858 by George W. Morse. This internally primed system was perfected by the American Col. Hiram Berdan in 1866 and adopted in Europe. A self-contained primer also was developed by British Col. Edward Boxer in 1867 and used exclusively in the United States (Barnes 1972:68–69).

Centerfire, exterior-primed cartridge technology was being investigated as early as 1858 at the Frankfort Arsenal (in Philadelphia, Pennsylvania). The Berdan centerfire cartridge was commercially manufactured by the Union Metallic Cartridge Company (now Remington) in 1868. The .50-70 cartridge was the first internally primed load (Scott et al. 1989). This Benet primed cartridge was used for a short time during the Civil War (1861–1865). It was used in various Springfield rifles and carbines (Scott et al. 1989) and in a variety of repeating and single-shot sporting rifles as well as the Remington single-shot military rifle (Barnes 1972:115).

Approximately 50,000 Civil War–issue Springfield rifles were converted to breech-loading weapons and the ammunition was reduced from .58 to .50 caliber (Wooster 1987:132). The Sharp's carbine also was converted to a .50-caliber cartridge system during and after the war. The .50-caliber Spencer carbine fired

seven rounds without reloading, making it a deadly weapon relative to the earlier, single-shot guns (Wooster 1987:133–134).

Centerfire cartridges improved rapidly after 1870. The .50-70 was quickly replaced by the .45-70 cartridge, which was more reliable and less sluggish (Scott Berger, personal communication 1991). This blackpowder load was manufactured in the Frankfort Arsenal from 1873 until 1878 or 1880.

The need for new military ammunition supplies in 1872 resulted in the technological advances of the 1873 Springfield rifles and carbines and the Colt 1873 revolver. The Springfield rifles were single-shot but more accurate than earlier rifles. The Colt revolver no longer used a cap and ball and was unsurpassed in close combat. It was referred to as the "Thunderbuster," "Peacemaker," and "Equalizer" and was a standard cavalry handgun until the 1890s (Reedstrom 1977 in Wooster 1987:134). The single-shot Springfields were used until 1882, when they were replaced with the .30-caliber magazine rifle (Wooster 1987:134).

By 1885 a French chemist by the name of Vielle developed the first practical smokeless powder, and in the United States the first smokeless small-bore cartridge was used in 1892 in the Krag bolt-action rifle. Winchester followed with a smokeless sporting round (.30-30) in 1895. Although blackpowder cartridge use did not decline in the United States until 1910, the smokeless rounds brought us to modern weaponry. The various styles of rifles and pistols used by the U.S. military are depicted in Figures 19.2 and 19.3.

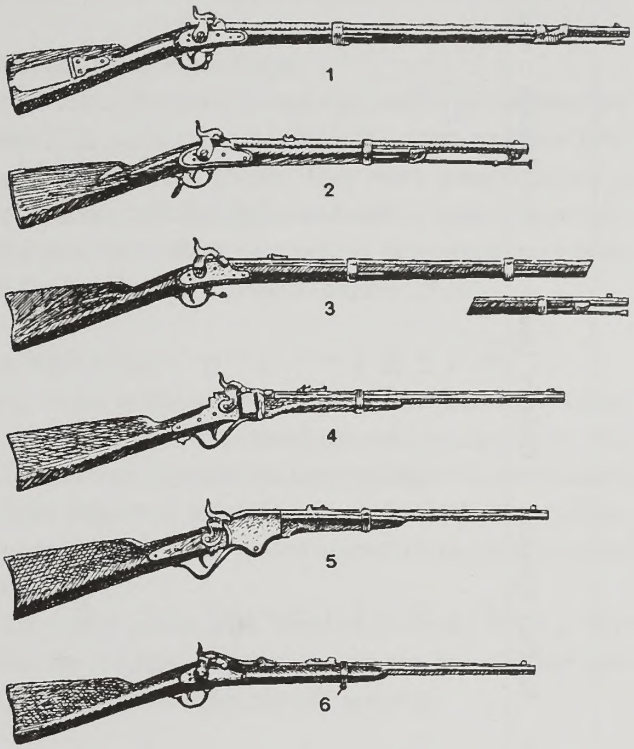


Figure 19.2. *Military rifles: (1) 1841 Tyron "Mississippi Rifle", (2) 1854 Springfield Carbine, (3) 1861 Springfield Rifle, (4) 1863 Sharps Carbine, (5) 1865 Spencer Carbine, (6) 1873 Springfield Carbine (from Wooster 1987:133).*

AMMUNITION RECOVERED FROM FORT CRAIG

The excavations from the five different areas across the fort recovered 304 bullets, cartridge cases, and percussion caps. Table 19.1 lists the type of ammunition, its dates of production, and the excavation areas where it was found. The following section provides a brief description of the different types of ammunition recovered.

.58-Caliber Minie Ball

Twenty-seven Minie balls were recovered during the five field seasons. The Minie ball was generally used in the U.S. Springfield Standard Musket. It

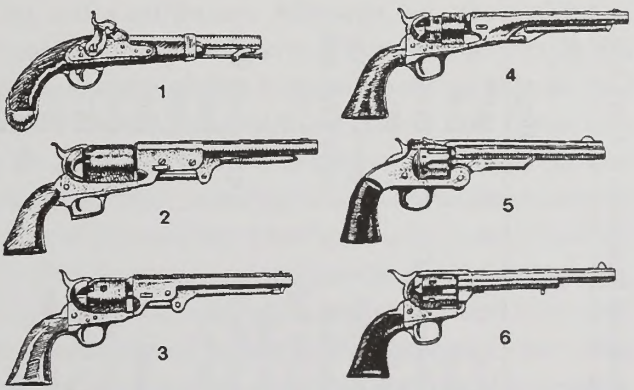


Figure 19.3. *Military pistols: (1) 1842 Horse Pistol, (2) 1847 Colt "Walker", (3) 1851 Colt Navy, (4) 1860 Colt Army, (5) 1869 Smith & Wesson, (6) 1873 Colt "Peacemaker" (from Wooster 1987:135).*

Table 19.1. Munitions Recovered at Fort Craig

	Dates							
	Begin	End	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
.58 Caliber Minie	1855	1880	4	6	3	10	4	27
.69 Caliber Minie	1855	1866	—	—	—	1	—	1
UMC Musket Percussion Cap	1816	1880	23	10	14	15	1	63
Pistol and Rifle Cap	1816	1880	—	—	29	4	1	34
.40 Caliber Round Ball	pre–Civil War	1864	—	—	—	1	—	1
.46 or .47 Round Ball	early Civil War	—	—	—	1	—	1	
.54 Caliber Patched Ball	1700	1900	1	1	—	1	—	3
.56 Caliber Lead Ball	—	—	—	1	—	—	—	1
.69 Caliber Round Ball	early Civil War	—	—	—	3	1	4	
12-Gauge Round Ball	1880	1923	—	7	1	—	—	8
.36 Caliber	1880	1930	1	—	—	—	—	1
.38 Caliber (Long)	1865	1930	1	3	—	—	—	4
.50/70 Cartridge Case	1866	1873	1	1	—	2	4	8
.45/70 Cartridge Case	1873	1878/80	—	39	10	1	1	51
.45/70 Headstamp Case	1878	1880	—	—	—	1	—	1
.40/60 Cartridge	1881	?	—	1	—	—	—	1
.44 Webley (Long)	1870	1940	1	—	—	—	—	1
.45 Smith and Wesson	1875	1892	—	3	—	—	1	4
.32 Smith and Wesson	1878	present	—	2	—	—	—	2
.41 Short	1863	1935	—	2	—	—	—	2
.42 Caliber	1860	?	—	—	—	1	—	1
.44 Long Centerfire	1875	1908	—	—	—	1	—	1
.44 Short	1864	1920	—	4	—	—	1	5
.22 Short	1857	present	—	1	—	—	7	8
.22 Long	1887	present	—	1	—	4	2	7
Lead Buckshot and BB	1769	present	1	3	28	1	3	38
Cartouche	1855	1866	—	—	1	—	—	1
.41 Caliber Short	1864	1873	—	—	—	1	—	1
.56-52 Spencer Carbine	1861	1870s	—	—	1	1	—	2
.56/56 Spencer	1860	1920	—	—	—	1	—	1
.52 Sharps and Hankins	1861	late 1860s	—	—	1	1	—	2
.32 Short	1860	1900s	—	—	1	—	—	1
.32 Long	1861	1936?	—	—	1	—	—	1
.32 Extra Short	1871	1920	—	—	1	—	—	1
.38 Caliber Colt	1851	1867	—	—	—	1	—	1
.45 Caliber Rifle	?	?	—	—	—	1	—	1

Table 19.1. Continued—

	Dates							
	Begin	End	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
.45 Caliber Colt (Balloon Head)	1867	1910	—	—	—	1	—	1
.45 Caliber Colt	1873	1892	—	—	—	1	—	1
.52 Caliber	?	?	—	—	—	1	—	1
10-Gauge Smokeless	1886	1902	1	—	1	—	—	2
12-Gauge Smokeless	1886	1902	—	—	1	—	—	1
.22 Mushroom Bullet	post–WWII	—	—	—	1	—	1	
.38 Caliber Automatic	post–WWII	—	—	—	1	—	1	
.38 Target Bullet	recent	—	—	—	—	1	—	1
.44 Caliber Replica	recent	—	—	—	—	1	—	1
12-Gauge Shotgun Shell	post–WWII	—	—	—	—	1	1	
Total			34	85	93	61	31	304

was introduced into the United States in 1855 and reflects early weaponry at Fort Craig. The Minie ball represented a considerable technological advance over earlier round ball projectiles, which resulted in improved accuracy, greater distance, and more rapid loading (Figure 19.1a). The Minie ball was replaced by cartridges in 1880.

UMC Musket Percussion Caps

The UMC Musket Percussion cap was used with the standard .58-caliber U.S. Springfield Musket, the same gun that fired the Minie ball described above. They were manufactured in Frankfort Arsenal in Philadelphia and used to ignite the powder to fire the gun. Sixty-three percussion caps were recovered, and both fired and unfired rounds (Figure 19.1c).

Pistol or Rifle Caps

Pistol caps work in the same way as musket percussion caps but are used in cap-and-ball revolvers and pistols. They, too, replaced the earlier, flintlock ignition system and were critical for the later transition to self-contained metallic cartridges. Copper percussion caps have been manufactured in the United States since 1816.

Thirty-four pistol caps were recovered. Twenty-nine came from the officers' quarters, four were found in the new hospital, and one came from the old hospital.

.56-Caliber Lead Ball

The lead ball was an early innovation in ammunition technology, which provided greater range and improved accuracy over firearms using short arrows, crossbow bolts, and rounded stones (Barnes 1972:317–318). Cast, round projectiles have a long history of use and were the principal projectile for more than half a millenium. Although the spherical bullet exhibits poor aerodynamics and its effective range was limited to 300 yards, it was used for a long period of time because lead was plentiful and the round ball was easy to cast. It was also used by the American backwoodsman in rifled arms because the munition was easily manufactured. The smoothbore muzzle and other arms that used the round ball were common until the 1800s. In 1855 the round ball was superceded technologically by the Minie Ball and rifled arms, but it continued to be used for some time. Jacketed bullets were developed in the 1880s and 1890s, replacing both the round ball and conical projectiles.

A single .56-caliber lead ball was recovered from the room (SU 12) north of the bakery in the soldiers' quarters. This ball is an unfired round.

12-Gauge Round Ball

Projectiles used in 12-gauge shotgun loads were first produced in 1880 and were manufactured until 1923. These bullets were used in an extremely inaccurate smoothbore gun. The overall ball diameter exceeds .60 inches, much larger than a musket ball.

Seven 12-gauge round balls came from the soldiers' quarters and one was found in the officers' quarters (see Figure 19.1b). They consisted of both fired and unfired rounds.

.38-Caliber (Long)

The .38-caliber bullet dates to 1865 at the end of the Civil War (Barnes 1972:278). It was used in both rifles and handguns. The .38 (long) was used in the Remington-Beals single-shot rifle from 1867 until 1875. It was also fired from the 1866 Remington revolving rifle, as well as a number of other rifles—Allen, Ballard, Stevensons & Wesson—and such revolvers as the Enterprise, Favorite, Forehand & Wadsworth, and Colt (Barnes 1972:278).

The .38 (long) was the official U.S. military revolver cartridge from 1892 until 1911, although the Colt .38 long had been introduced in 1875. It was used in Colt Army and Navy revolvers with swingout cylinders, which were developed in 1887 (Barnes 1972:162). This bullet was replaced by an interior lubricated load by 1900 (Suydam 1979:158). Interior lubrication prevented the bullet from getting dirty as easily and left no lead in the barrel (Scott Berger, personal communication 1991). The .38 long was a good, short-range load for small game, but the overall accuracy was poor (Barnes 1972:278).

One .38-caliber (long) case and two bullets were recovered from the soldiers' quarters. The shell case came from Room 1 (SU 5), and the bullets came from Room 5 (SU 6) and Room 6 (SU 7). Another .38-caliber long bullet was also recovered from the vicinity of the front gate (see Figure 19.1d). It was found between the north and south guardhouse (SU 1) and was unfired.

.50-70

The .50-70 cartridge was used in U.S. Military rifles from 1866 to 1873 (Barnes 1972:115). Known as the Benet primed, it was used in various Springfield rifles and carbines (Scott et al. 1989). This cartridge was also popular in a variety of single and repeating military and sport rifles, as well as the Remington single-shot military rifle (Barnes 1972:115). It was replaced by the .45-70 in 1873 (Scott Berger, personal communication 1991).

Eight .50-70 cartridges were recovered during the excavations. One came from the main room of the bakery in the soldiers' quarters, one was from the south guardhouse, two were from the new hospital, and four came from the old hospital.

.45-70

As stated above, the .45-70 cartridge replaced the .50-70. It, too, was used for a short time between 1873 and 1878 or 1880. This blackpowder load was manufactured in Frankfort Arsenal and also represented an early Benet primed ammunition. The load was less sluggish and more reliable than its predecessor. It was soon replaced by smokeless powder ammunition, however.

Fifty-one .45-70 cartridges were found (see Figure 19.1e). Thirty-nine came from the soldiers' quarters; all but three were found in a cache below the floor in Room 5. Ten came from the officers' quarters and one each came from the old and new hospitals.

.40-60

The .40-60 was used in the Marlin 1881 and 1895 lever-action repeaters and the slide-action Colt Lightning rifles (Barnes 1972:93). This load was also interchangeable with the .40-65 Winchester. A single .40-60

case was recovered from Stratum 2 in Room 1 of the soldiers' quarters. It was a fired round and may have landed on the roof.

.45 Smith & Wesson

The .45 Smith & Wesson is an obsolete blackpowder cartridge introduced in 1875 and used in the Smith & Wesson Schofield revolver (Barnes 1972:172). This revolver was adopted by the U.S. Army and used until 1892, when it and the .45 Colt Army revolver were replaced by the .38-caliber Colt Army and Navy models. General Custer used this revolver at the Battle of the Little Bighorn (Barnes 1972:172). The gun was used until 1940.

The .45 Smith & Wesson was also used in the Schofield or Colt Army models. Barnes (1972:172) notes that although the single-action Colt .45 revolver is thought of as the sidearm of the Old West, the Smith & Wesson was also quite popular.

Four .45 Smith & Wesson bullets were recovered. Three unfired rounds came from the soldiers' quarters—two from Room 5 and one from Room 6. The remaining bullet came from Room 7 of the old hospital.

.32 Smith & Wesson

The .32 Smith & Wesson, designed for a single-action revolver, was introduced in 1878 and was a very popular cartridge because of its low price (Barnes 1972:154). The load is still used today. A variety of light revolvers were made for this cartridge by Colt, Harrington & Richardson, Hopkins & Allen, Irve Johnson, and Smith & Wesson. This gun is probably the minimum caliber required for serious self-defense. It can be used to hunt birds and small game at close range, but is not powerful enough to be viewed as a sporting cartridge (Barnes 1972:154).

Two .32 Smith & Wesson cartridges were recovered from the upper fill in Room 5 of the soldiers' quarters. Both probably represent lost rounds.

.41 Short

The .41 short was a popular rimfire round for light arms. Barnes (1972:279) notes that it was introduced in 1863 or 1864 with the National Arms Co.'s breech-loading derringer. It was made by National until 1870 when the company was purchased by Colt. Colt produced it from 1872 until 1890 and adapted it to the Thuer-patented or third-model derringer and to the House Pistol or "clover-leaf" cylinder model of 1871. Allen, Enterprise, Williamson, X.L., and others also produced derringers, which used the .41 short. The Remington over-under or double derringer was probably the most famous of these derringers and was manufactured between 1866 and 1935.

The .41 rimfire short was not very powerful, although at short range it could inflict a severe wound. Barnes (1972) describes these guns as morale builders or guns used to threaten. Two cases from a .41 short were found below the floor in Room 5 of the soldiers' quarters.

.44 Short

The .44 short was a versatile load that could be fired in most arms that used the popular .44 long rimfire (Barnes 1972:279). It was well established by 1880 and popular for pistols and revolvers made by Allen, Forehand & Wadsworth, and Remington. It is best known as a cartridge used for the single-shot Hammond "Bulldog" pistol made by the Connecticut Arms & Manufacturing Company of Naubuc, Connecticut (Barnes 1972:279). The pistol was marketed before the end of the Civil War, dating the first .44 short to 1864–1865. It was in use until the 1920s.

Five bullets of this caliber were recovered. Four came from the soldiers' quarters—three from Room 5 and one from Room 6—and one was recovered in Room 2 of the old hospital.

.22 Short

The .22 short represents one of the oldest, American self-contained cartridges (Barnes 1972:273). It is widely used today and was introduced by Smith & Wesson in 1857. This round was originally intended for self-defense but was more commonly used as a short-range gallery or plinking round. Virtually every arms company has turned out a round of this caliber.

The .22 short is good for very small game or bird hunting, but velocity drops rapidly at 50 yards (Barnes 1972:272). It can, however, kill a person within this range. One .22 short case was found in the upper fill of Room 1 in the soldiers' quarters and seven came from Room 1 in the old hospital.

.22 Long

The .22 long was introduced in 1887 and is still used today. It was used for small game and had slightly more power than the .22 short. One .22 long was found in Level 1 of the trash concentration behind the soldiers' quarters, four came from the new hospital, and two were recovered from the old hospital. These cartridges represent the post-military occupation at the fort.

.54-Caliber Patched Ball

Three .54-caliber lead balls were found. One unfired ball was recovered from the area between the north and south guardhouses, one came from the soldiers' quarters, and the last one was recovered in the new hospital. This ball was used in a muzzleloader such as the Hawkins or Plains rifle and is similar to the old "mountain man" rifle. This load was also used in the U.S. common rifle, Model 1841 (Mississippi); possibly in U.S. pistols, Model 1842 and earlier; and in Halls rifles and carbines (J. Wilson 1966b:28). They were in use from the late 1700s until 1900 but were considered obsolete by 1876. These weapons were extremely accurate for their era and represent the largest- bore muzzle (Berger, personal communication 1991). They could easily take down a buffalo or grizzly bear.

.44 Webley (Long)

A single unfired .44 Webley (Long) cartridge was recovered from outside the north wall of the south guardhouse and probably represents a lost round. It contained 1-800 blackpowder (FFG), which is typically used in large-bore guns.

The .44 Webley (Long) cartridges were manufactured in England and were introduced to the United States by 1870 (Suydam 1979:198). They originated in 1868 for the Webley Royal Irish Constabulary Model revolver. The shell was copper cased with a centerfire primer and was loaded in the .44 Webley in the United States from 1870 until 1940. The .44 Webley was strictly a short-range gun although its stopping power was better than that of the smaller calibers (Barnes 1972:170).

.36-Caliber Bullet

One .36-caliber bullet came from outside the north wall of the south guardhouse. This bullet is a badly deformed sporting round that was probably fired from a muzzle-loading sporting gun similar to a Sharps, Winchester, or Marlan. This round dates from between the 1880s and 1930 and may represent ammunition used in the last years of Fort Craig or after the fort was decommissioned.

10-Gauge Smokeless Shotgun Shell

The 10-gauge shell was manufactured by the Union Metallic Cartridge Company (UMCC), Bridgeport, Connecticut. It was a commercial round produced between 1886 and 1902 (before the merger with Remington in 1902). The first successful commercial smokeless powder was developed for shotgun shells by Captain E. Schultz under an 1864 patent (Barnes 1972:285). Smokeless powder was not used in rifles until 1885.

Modern shotguns date back to 1750. They were fired by flintlock and percussion until the Lefaucheaux pinfired breechloading shotgun was patented in 1836. Many hunters preferred the front-loading shotgun, which remained in use until 1900. The improved centerfire shotgun was developed by Charles Lancaster in England in 1851. The muzzle-loading shotgun became obsolete once the centerfire shotgun was developed. Choke boring was not known until 1870. The 10-gauge shotgun worked well as a long-range shot (Barnes 1972:288).

Two 10-gauge shotgun shells were recovered—one outside the north wall of the south guardhouse and one from below the floor in Room 4 of the officers' quarters. The shell found near the front gate had a hole in the bottom, indicating that it was not fired in a shotgun but probably exploded on the ground with a .22 caliber gun. The shell probably dates to around 1900 because it is not a blackpowder round (Scott Berger, personal communication 1991).

Cartouche

The cartouche is a French development and was the precursor of the cartridge. It was a pre-packed load used with a percussion-cap-ignited musket, which was developed for rapid reloading. The soldier "pulled the pre-lubricated bullet with his teeth, dumped the pre-measured powder charge down the bore, dropped in the bullet with a ramrod thrust, and cocked and capped the rifle as it came to his shoulder and fired" (Berger 1994:2). These pre-packed loads were made of a variety of materials, including copper, brass, paper, wood, an early rubber, and nitroglycerine-treated leather. Metal and rubber were preferred as they were waterproof.

The cartouche generally dates from 1855 to the mid 1860s. It was sometimes supplied to Indian scouts to avoid issuing repeating rifles to them. It was not used after 1870 (Berger 1994:2).

A single cartouche was recovered from below the floor in Room 3 of the officers' quarters. The dates for this artifact are consistent with those of a number of other artifacts that characterize early weaponry at the fort.

.56-52 Spencer Carbine Bullet

Between January 1, 1861, and January 30, 1865, the U.S. government purchased large numbers of Spencer carbines and 58,238,924 rounds of ammunition. These guns and ammunition were used in the Civil War as well as the campaigns against the Northern Cheyenne, the Modocs of California, and the Sioux.

One of these bullets was recovered from below the floor in Room 3 of the officers' quarters. It represents a later version of the interior lubricated bullet, which was probably manufactured by the Union Metallic Cartridge Company (UMCC). It dates to between 1861 and the late 1870s.

.52 Sharps & Hankins Rifle Bullet

According to Scott Berger (1994:3), this type of bullet is an extremely rare artifact in the West. The Sharps & Hankins rifles were well regarded, and between January 1, 1861, and June 30, 1865, the U.S. government purchased an unknown number of these rifles and more than a million cartridges. After the war they were abandoned as the military began to standardize its weapons. Because these weapons were rare in the West, it is likely that the bullets belonged to an officer who served in the Civil War or who was reassigned to the West immediately after the war.

Identifying characteristics include its excessive weight (432 grains), sharp ogive and bullet point, and the double bands above the bullet crimp area. The base may have a small ring for a zinc gas check.

Two of these bullets were recovered, one from Room 3 of the officers' quarters and one from the trash pit east of the new hospital. Although these artifacts could date to as late as 1875, it is more likely that they date to the late 1860s and probably the Civil War.

.32 Short

The .32 short originated from a Smith & Wesson patent in 1860 (Barnes 1972:277). It was first used in

Smith & Wesson Model #1½ and #2 revolvers, but was later adapted to Colt revolvers and handguns such as Allen, Bluejacket, Enterprise, Favorite, and Whitney, to name a few; and to rifles such as the Remington, Stevens, and Winchester.

Rifles and pistols using this caliber were popular until the 1900s. It was a good small-game caliber up to 50 yards as it produced a clean shot that would not spoil the meat (Barnes 1972:277). Its accuracy was adequate for field use. One .32 short was found in the officers' quarters.

.32 Long

One .32 long was recovered from the officers' quarters. This caliber load was originally developed for revolvers but was also used in rifles. It was introduced in 1861 by Smith & Wesson for their #2 revolver but was produced by many manufacturers, including Allen, Favorite, Forehand & Wadsworth, Pioneer, Webley, and X.L. New Line Colt revolvers were made in this caliber, as well as a number of single-shot rifles—Marlin, Ballard, Maynard, Remington, and Winchester (Barnes 1972:277). This load is similar to the .32 short but delivers slightly more energy. It, too, was good for small game as it was a clean shot, but it was not effective beyond 50 yards. Rifles using this load were made as late as 1936 (Barnes 1972:277).

.32 Extra Short

This cartridge was originally made for the Remington magazine pistol and the Chicago Firearms Co. "Protector" palm pistol (Barnes 1972:277). These guns experienced limited popularity, but this caliber continued in use in handguns and rifles from 1871 until 1920. One was found in the officers' quarters.

12-Gauge Smokeless Shotgun Shell

The 12-gauge smokeless shotgun shell was used to hunt waterfowl and other game birds. It was manufactured by the Union Metallic Cartridge Company (UMCC) from 1886 until 1902, when the company merged with the Remington Arms Company. The blackpowder, smokeless load dates from 1885 to 1910. Scott Berger examined this shell and places it somewhere at the turn of the (nineteenth) century. One shell was recovered from Stratum 2 in Room 3 of the officers' quarters.

Lead Buckshot and BB

Modern shot of uniform size and quality was introduced by an Englishman, William Watts, in 1769 when he discovered its advantages by dropping shot from a tower (Barnes 1972:285). Modern shotguns date back to 1750. Buckshot of varying sizes were used in a cartridge called the "Buck An' Ball," which had widespread use prior to and during the Civil War (Keith Kofford, personal communication in a letter to ARI dated 1993). Various gauge shot is still used today in different gauge shotgun shells for hunting small and large game.

Thirty-seven pieces of lead buckshot of various gauges were recovered from the following proveniences: below the floor in Room 3 of the officers' quarters ($n = 28$), the soldiers' quarters (3), the old hospital (3), the new hospital (2), and the front gate (1). The dates of these artifacts are consistent with all occupations of the fort.

One BB was recovered from the upper fill in the hallway of the new hospital. The No. 2 lead BB was a common choice for hunting ducks, geese, and turkey. The condition of this shot suggests that it is only 20 to 30 years old and its deposition was probably reflects recent hunting or target practice.

.22 L. R. Mushroom Bullet

One .22 L.R. mushroom bullet was recovered. This hollow-point (28 grains) bullet is of post–World War II vintage and is still manufactured today (Berger 1994). It was recovered from the upper fill (Stratum 1) in the hallway of the new hospital and is probably associated with recent target practice at the fort.

.38-Caliber Automatic Bullet

A single automatic, .38-caliber full metal jacketed bullet came from the new hospital area, and it also represents more recent use of the fort. It postdates World War II (Berger 1994).

.38-Caliber Colt Cartridge

The .38-caliber Colt, nitrated paper cartridge was manufactured by Colt Cartridge Works, Hartford, Connecticut, from 1851 until 1867 and was the common load in the .38-caliber Colt Navy percussion revolver (Berger 1994:3). The one cartridge recovered came from Level 1 of the trash pit (SU 25) east of the new hospital.

.38-Caliber Target Bullet

One .38-caliber target bullet came from the hallway of the new hospital. This .38 special, hollow base wadcutter target bullet again represents recent use of the Fort Craig area (Berger 1994:4). Berger notes that he used this bullet for rabbit hunting around the fort in the mid to late 1970s.

.40-Caliber Round Ball

Berger (1994) describes this load as a .397-inch diameter, dead soft lead round ball. It may represent a standard round for the 1842 musket, which incorporated a .69-caliber round ball with three smaller lead balls on top of blackpowder in a paper cartridge. This load was used prior to and during the Civil War (Kofford 1993), at least as late as 1864 (Lord 1965). It may also represent a .40-caliber single-shot (Berger 1994). This round ball was found on the floor in the black ward of the new hospital.

.41-Caliber Short Bullet

One .41-caliber short bullet was also found on the floor of the black ward in the new hospital. This copper-cased, rimfire Derringer bullet was made by C. D. Leet of Leet & Hall, Springfield, Massachusetts, and was manufactured from 1864 until 1873 (Berger 1994).

.44-Caliber Long Centerfire

A .44-caliber long centerfire cartridge was introduced in 1875–1876 as a load for the J. M. Maulin Ballard Sporting Rifle No. 2, as well as other single-shot rifles (Barnes 1972:102). It was replaced by the .44 extra long. Both became obsolete by 1908 with the introduction of the .44-40 WCF (Barnes 1972:104).

The .44 long centerfire is equivalent to the .44 long rimfire. Breech-loading rifles were first developed for rimfire cartridges, but it was easy to develop centerfire technology for the same rifles, allowing the shooter to reload. These centerfire loads were not much better than their rimfire counterparts so they were only used for a short time (Barnes 1972:102). One cartridge of this type was recovered from the floor in the black ward in the new hospital.

.44-Caliber Replica

This bullet is a replica used in the modern .44-caliber Ruger or similar replica of the Remington, blackpowder, percussion revolver and was probably used sometime after 1980 (Berger 1994). One of these bullets was found in the trench fill (SU 27) outside the east wall of the white ward of the new hospital.

.42-Caliber Bullet

Berger (1994) describes this deformed bullet, made of dead soft lead with very wide rifling marks and no grease or crimping grooves, as a Dow & Johnson type designed for either an 1860 Colt Army revolver or an 1861 Remington Model revolver. It was recovered from Level 1 in the excavated trash area (SU 25) east of the new hospital.

.45-Caliber Rifle Bullet
This damaged bullet is difficult to assess but probably represents a .45 caliber (Berger 1994). It was recovered from Level 2 of the excavated trash (SU 25) east of the new hospital. Its dates of manufacture are unknown.

.45-Caliber Colt Cartridge (Balloon Head)
The .45 Colt balloon head cartridge was manufactured by UMCC from 1867 until 1910. One cartridge was found on the floor in the black ward of the new hospital and is probably of 1870s vintage (Berger 1994).

.45-Caliber Colt Cartridge
This cartridge was introduced by the Winchester Repeating Arms Company (WRA Co.) in 1873 and consisted of an inside lubricated bullet in a brass balloon case with no head stamp (Berger 1994). It probably dates to the 1870s (Berger 1994). One cartridge was recovered below the floor in the black ward of the new hospital.

.46- or .47-Caliber Round Ball
One .46 or .47 inch diameter round ball came from Level 2 of the trash pit (SU 25) east of the new hospital. It weighs 147 grams and could be from a .45-caliber muzzleloader. More than likely it represents a pistol ball dating to the early Civil War. This round ball is contemporaneous with the .69-caliber round balls used in the 1842 smoothbore musket (Berger 1994).

.45-70 Cartridge (Headstamp)
This Benet primed copper case with headstamp was manufactured by Frankfort Arsenal in November of 1878 (Berger 1994). One .45-70 cartridge with head stamp was recovered from below the floor in the white ward of the new hospital. It is likely that this cartridge dates to the late 1870s–early 1880s.

.52-Caliber Bullet
A .52-caliber conical lead bullet with a single annular ring came from below the floor in the white ward of the new hospital. It resembles a Johnson & Dow design for the .52-caliber Sharps and Spencer, although similar bullets that are more rare in the West were manufactured by Starrs and Maynards (Berger 1994). This bullet is a paper cartridge load containing blackpowder and ignited by a percussion cap. It probably dates to the early Civil War period.

.56-56 Spencer Bullet
Barnes (1972:281) describes the .56-56 Spencer as the original cartridge developed for the first Spencer rifle and carbine patented in 1860 and produced in quantity by 1862. This load was manufactured until 1920. The Spencer rifle provided seven-shot, lever-action, repeat firing at the rate of seven shots in twelve seconds. These bullets were also used in the Ballard & Joslyn carbine. The Spencer arms were adopted by the U.S Army Ordnance Department for the Civil War. He further notes that at Gettysburg these arms gave the Union Army a distinct advantage, and further, that if the Spencer rifle had been available in quantity at the beginning of the war the conflict would have been shortened by a year or more.

One of these bullets was recovered from Level 3 in the trash pit (SU 25) east of the new hospital. Although this load was manufactured until 1920, its association with other early arms in the excavated trash suggests a date between 1862 and the late 1870s.

.69-Caliber Round Ball
The .69-caliber round ball was part of a "Buck An' Ball" cartridge used prior to and during the Civil War. It was used extensively in the first two years of the war (Berger 1994) and as late as 1864 (Lord 1965). It was

fired in a Model 1842 Musket, which was the standard arm of the U.S. Infantry prior to 1855 (Berger 1994). The "Buck An' Ball" load consisted of a single .69-caliber ball placed in a paper cartridge with blackpowder and three smaller balls on top (Berger 1994; Kofford 1994). It was replaced by the .69-caliber musket of 1842, which was issued in 1855 (Berger 1994).

Four .69-caliber round balls were recovered. Two were found in Level 2 of the trash area (SU 25), one came from Level 1 of the grids placed outside the south wall (SU 26) of the new hospital, and the fourth came from Room 1 of the old hospital.

.69 Minie Ball

The .69-caliber Minie projectile replaced the .69-caliber round ball in 1855. It was used in the Model 1842 Rifle Musket, which was issued in 1855 (Berger 1994) and became obsolete with the development of cartridge technology in the 1850s and 1860s.

A single .69-caliber Minie was recovered from Level 2 in the trash pit east of the new hospital. Its association with the earlier .69-caliber round ball suggests that new technology was reaching Fort Craig.

SUMMARY

The ammunition recovered from the excavations was examined to address two research questions—the effectiveness of Army shipping and the economic status of personnel. A third question focused on whether or not the new hospital was constructed on a pre-1870s trash scatter.

The Effectiveness of Army Shipping and Procurement

The excavations recovered ammunition that clearly indicate that Fort Craig was supplied with technologically advanced weapons as they became available, although some obsolete weapons were still being used. Furthermore, the assemblage represents both the military and civilian occupations at the fort.

A .54-caliber patched ball found inside the front gate provides evidence that the earlier smoothbore, muzzle-loaded guns were being used. These guns remained in use for a long time because powder and balls were easily obtainable when cartridges of the appropriate caliber may not have been.

Pistol caps were used with smoothbore, single-shot pistols during the early years at Fort Craig. Thirty-four of these caps were recovered, 29 from the officers' quarters alone. These artifacts support other data indicating that early weaponry was used at the fort.

The presence of .58 Minie projectiles indicates that during the early years at Fort Craig, troops were armed with the newly developed rifled arms. These bullets came from all five areas investigated. The Minie bullet became available in 1855 and Fort Craig was initially occupied just a year before. Fort Fillmore also received the advantages of this new weaponry—21 Minie bullets and hundreds of percussion caps were found at the fort (Staski and Johnston 1992:6).

The cartouche was also used during this period (1855–mid 1860s). This pre-packed load allowed for faster firing with percussion-cap-ignited muskets or rifles. This pre-measured load was soon replaced by Benet primed cartridges.

The technological superiority of the Minie bullet would soon wane after cartridges were developed in 1866. With this innovation came breech-loading rifles that could fire multiple bullets, providing greater accuracy and firing speed. The presence of the .50-70 and .45-70 early Benet primed cartridges at Fort Craig suggests, again, that the soldiers received newly developed weaponry as soon as it was developed.

Additional evidence of early weaponry is found in the .56-52 Spencer carbine bullets and the .52 Sharps & Hankins Rifle bullets recovered from the officers' quarters and the old hospital. These loads date from 1861 to the mid-1860s for the former and the late 1860s for the latter.

A wide variety of jacketed bullets spans the period between 1860 and 1940. While these loads could date to both occupations of the fort, their association with other early bullets supports other data indicating that newly developed ammunition reached this frontier fort. These cartridges include the .38-caliber long, .44 Webley long, .45 Smith & Wesson, .41 short, .44 short, .22 short, and .32 short, long, and extra short.

Later weaponry at the fort spans the era from 1880 to the present. Although some may be related to the fort's military use between 1880 and 1885, it is likely that most of this late weaponry is related to the subsequent civilian use of the fort. The later ammunition includes smokeless shotgun shells, which date from between 1886 and 1902. These dates coincide with the post-military civilian occupation of the fort. Other late ammunition includes .22 long cartridges (1887 to the present), a .40-60 cartridge (1881–?), a .36-caliber bullet (1880–1930), and 12-gauge round balls (1880–1923).

The Economic Status of Personnel

The ammunition recovered from the excavations was analyzed to determine if the various assemblages indicate clear economic status differentiation. Often the status of personnel at frontier forts was stratified and could be recognized by the goods they possessed. Civilians and officers typically purchased their own guns. Officers often possessed several handguns, rifles, and sporting weapons. Enlisted men were generally restricted to military-issue shoulder arms (Staski and Johnston 1992:7; Wilson 1967). This dichotomy between officers and enlisted men at Fort Craig is not that clear, however. The military-issued ammunition found in the respective quarters indicates that both enlisted men and officers used rifles and revolvers, thereby prohibiting any definitive assessment of the status of military personnel.

Non-military issued weapons are represented by several of the cartridges found – .44 Webley (long), .22 short, .38 long, 12-guage round ball, .36-caliber sporting round, .44 short, and .41 short. Two of the cartridges, the .44 Webley (long) and the .41 short, probably belonged to guns owned by civilians at the fort. The .44 Webley (Long) came from a handgun that was carried for self-defense by civilians, such as bankers and sutlers, while the .41 short was used in a variety of derringers (Scott Berger, personal communication, 1991). The remaining cartridges could not, with any certainty, be attributed to one specific personnel group, which, again, makes it difficult to address the question of economic status.

Context of Ammunition from the New Hospital

The stratigraphic context of the bullets recovered from the new hospital was examined to determine if the wards were built on a pre-1870s trash deposit associated with the old hospital. They were further examined to evaluate the integrity of strata in the wards and the excavated trash. Tables 19.2 and 19.3 provide the stratigraphic locations of the various types of ammunition.

Ammunition recovered from the black ward appears to indicate that strata are mixed and that the subfloor Stratum 4 is not associated with the pre-1870s hospital. The association of the early (1855 to 1866) .58 Minie with the later (1875/76 to 1908) .44 long centerfire on the floor (Stratum 3) indicates that this

Table 19.2. Stratigraphic Context of Ammunition in the Black Ward (SU 21)

Stratum	Type	Date Range
Stratum 1 (upper fill)	None	
Stratum 2 (fill)	.22 long cartridge	1867–present
	.58-caliber Minie Ball	1855–1866
Stratum 3 (floor)	.58-caliber Minie Ball	1855–1866
	.44 long centerfire	1875/76–1908
	.40-caliber round ball	pre–Civil War to 1864
	.41 short	1864–1873
	.45 Colt cartridge	late 1870s (?)
Stratum 4 (below floor)	.45 Colt	late 1870s (?)

Table 19.3. Stratigraphic Context of Ammunition in the White Ward (SU 23)

Stratum	Type	Date Range
Stratum 1 (upper fill)	.22 LR Mushroom bullet	post–WW II
	.22 long (3 bullets)	1887–present
	.38 target bullet	modern
	.38 automatic cartridge	post–WW II
	.58 Minie ball	1855–1866
	#2 BB	
Stratum 2 (fill)	None	
Stratum 3 (floor)	.45/70 cartridge	1873–1878/80
Stratum 4 (below floor)	.50/50 cartridge	1866–1873
	.45/70 cartridge (headstamp)	1878–1880 (?)
	.52 bullet	unknown
	.54 musket ball	1700–1876
	#0 buckshot	

stratum is not intact. The lack of integrity is probably the result of looters' activities in this area of the fort. A single .45 Colt cartridge was recovered from below the floor (Stratum 4). This cartridge probably dates to the 1870s.

The ammunition recovered from the white ward also suggests that strata are mixed and that the ward was not constructed on pre-1870s trash from the old hospital. Stratum 1 contains post–World War II bullets in association with the early (1855–1866) .58 Minie. Stratum 4, below the floor, contained a .45-70 cartridge with a headstamp indicating an 1878 manufacturing date. Again these data in conjunction with information from the black ward indicate that the wards were probably not built on a pre-1870s trash deposit.

Weapons at Fort Craig

Although no parts of guns were found during the excavations, the types of ammunition recovered indicate that a variety of arms were used at the fort. Specific types of military-issue weapons are described in letters sent from headquarters at Fort Craig to both military and civilian personnel. These letters identify weapons that were on hand at the fort and on loan to various people.[1]

Fort Craig N. Mex.
July 2nd 1861

Sir

Your communication of June 25th was received this evening by express from Major Ronell with accompanying papers, among which is one showing the number and class of arms in the possession of citizens in this vicinity, upon which I am to call in case arms do not reach here in time. To prevent misapprehension at Hd. Qrs., I state that not a single arm can be recovered from them, for instance: Mr Stapleton is put down for thirty muskets and twenty rifles, if he has any he has them with his train en route to the States, for I lent his Major Dowe 6 rifles with ammunition last week, to defend his ranch against the Navajoe Indians, who are committing outrages within 30 miles of here, they having killed 7 Mexicans a few days since near Socorro.

I have on hand for issue the following arms, accoutrements etc. Viz: (with which I can arm the Volunteers)

(20) twenty muskets old pattern
(20) twenty Rifles Cal 58
(11) eleven Navy revolvers
(26) twenty six Army Revolvers
(8000) Rifle cartridges Cal. 58
(2500) Navy pistol cartridges
(2500) Extra caps large

Required	(2500) Musket ball and Buck cartridges Cal 69
"	(2500) Army revolver cartridges
"	40 Waist belts and twenty Holster pouches

Mr. Stapleton being absent in the States, I doubt if the Cavalry Company can be raised for three months, in fact it may be set down as an impossibility, this force cannot therefore be relied upon to strengthen this post. Throwing out this anticipated force, as my views are asked, I would suggest that a 2nd Company of Infantry be order here, one which has one or more L—alterres (?). A mounted one would be more available in some respects were the horses in condition, but knowing the contrary, I deem that the infantry company would be more serviceable.

There are two Mountain Howitzers here, but in a useless condition. I write this hurried note, whilst the stage is waiting here, but will communicate with you more fully by the next mail, or by express as exigencies may demand.

I am Sir
Very respectfully
Your obt. Servant
R. Morris
Capt. R.M.R.
Comdg. Post

Headquarters Fort Craig NM
January 21st 1865

Clark, Mr. John A.
Surveyor General, N M
Santa Fe N M

Sir

I am instructed by the Colonel Comdg to request you to return to this Post the "Sharp's Carbine" for which he holds your mem'd receipt-dated 9the day of July 1863.

Very Respectfully Sir
Your Obedient Ser'vt
John Abbot
2nd Lt. Actg Adjt, 1st Cal Cav.
Post Adjutant

Head Quarters Fort Craig NM
January 21st 1865

Cook Capt. Geo. W.
1st N. M. Vols Inft.
Fort Cummings N. M.

Captain

I am instructed by the Colonel Comdg to direct you to return to this Post the "Artillery Saber" and the "Colts Pistol N.P." for which he holds your memorandum receipt.

Very Respectfully Your Obt Ser'vt
John Abbot
2nd Lt. Actg Adjt 1st Cal Cav.
Post Adjutant

Head Quarters Fort Craig NM
January 21st 1865

Ellis John W.
Lt. 1st N M Vols.
Fort McRae NM

Sir

I am directed by the Colonel Comdg to instruct you to return at once to this Post the Army Pistol Holster, Pistol Carbine and Sling and Swivel for which he holds your memorandum receipt.

Very Respectfully Sir
Your Obt Ser'vt
John Abbot
2nd Lt. Actg Adj 1st Cal. Cav.
Post Adjutant

Head Quarters Fort Craig N. M.
January 21st 1865

Stapleton Mr. Robert H.
Stapleton Ranch N.M.

Sir

I am instructed by the Colonel commanding to request you to return at once to this Post the "five rifles" for which he holds your memorandum receipt.

Respectfully Sir
Your Ob't Ser'vt
John Abbot
2nd Lt. Actg Adjt 1st Cal Cav.
Post Adjutant.

Headquarters Fort Craig NM
October 10 1870

Kobbe 1st Lt William A.
A.A.A. General
District New Mexico

Sir

Enclosed I have the honor to transmit copy of Quarterly Return of Ordnance and Ordnance Stores pertaining to the Post of Fort Craig NM for quarter ending Sept. 30th 1870.

In this connection I would respectfully call the attention of the General Commanding to the fact the following list embraces all of the ordnance of any possible use for future service in this country. Viz:

1	12 Pdr. Field Howitzer
1	12 Pdr. Garrison Howitzer
3	12 Pdr. Mt. Howitzers
145	Springfield Rifled Muskets Cal. 58 muzzle loading
4	Spencer Carbines and sufficient ammunition and tools to equip each arm.

Nearly everything embraced in this return other than as above mentioned could be dispensed with at this Post.

I am Sir
Very Respectfully
Your Obdt. Servant
F. W. Coleman
Capt. 15th Infantry
Comdg Post

The types of ammunition recovered and the various guns listed in the letters represent most of the different styles of weapons available at the time, although some obsolete weapons may have continued to be used. They also indicate that the soldiers at Fort Craig were kept up to date with the latest models. Non-military-issue guns were also present and were not just limited to use by civilians and officers, as evidenced by the

excavations within the soldiers' quarters. This evidence appears to be in contrast to the findings from Fort Fillmore, where the arms and ammunition recovered from the excavations showed a clear dichotomy between the officers and the enlisted men (Staski and Johnston 1992:7). Officers at Fort Craig did possess a greater variety of weapons, both military-issue and personal.

Not much information was gathered regarding the weapons used by the civilians employed at the fort. Post-military occupation of the fort, however, is represented in the assemblage. Most of the ammunition recovered from this period reflects hunting. ✠

NOTE

1. All of the letters are from microfilm records entitled "Letters received by Headquarters, District of New Mexico, September 1865–August 1890," which are on file at the Center for Southwest Research, Zimmerman Library, University of New Mexico. These records are part of National Archives Record Group 393, Records of U.S. Army Continental Commands, 1821–1920.

Chapter 20

BUTTONS



THE EXCAVATIONS RECOVERED 222 BUTTONS and two celluloid collar stays. Since buttons are often made from nonperishable material, these artifacts are usually the most common items within the clothing category recovered at historical sites. Buttons from both military uniforms and civilian clothing are represented in the Fort Craig assemblage. They are manufactured primarily from four materials—glass, metal, bone, and shell—and may be either single-piece or composite. The button assemblage was examined as a whole rather than being split among the assemblages of the constituent material types. The buttons are described here by morphology, material type, and likely function.

The size of buttons is measured in lines or "lignes" (40 lines equals a 1-inch diameter). Shirt and dress buttons usually fall between 10 and 20 lines, whereas vest, coat, and jacket buttons are sized from 24 to 36 lines (Sears Roebuck and Co. 1971). The same measurements appear to hold true for military clothing (Herskovitz 1978:39–40; Quartermaster General 1889:193–194). The measurable buttons are presented in Table 20.1 and the distribution of the total assemblage is shown in Table 20.2.

SINGLE-PIECE BUTTONS

Almost half (n = 110) of the buttons are representative of single-piece construction. This style of button is manufactured primarily from glass, bone, shell, pewter, or rubber. All were placed into the clothing category, though many undoubtedly came from the army-issued flannel shirts, longjohns, and frocks.

Glass

Fifty-nine of the 66 glass buttons recovered are white, four-hole, sew-through buttons. Five exhibit incised lines radiating from a concave center, one has a black and white floral design in the center, and one has a green and white design in the center; the remainder are plain with a slightly concave center. Two plain, white, two-hole, sew-through buttons were also recovered. All 59 buttons measure between 15 and 30 lignes, and most of them cluster between 18 and 22 lignes or within the shirt/longjohns button size range. Milk-glass buttons of this type were first produced in England in the mid-1700s and are still being produced today (Albert and Kent 1949). These buttons are often referred to as calicos or chinas (Luscomb 1967).

The remaining seven glass buttons have self-shanks, which means the shank was molded as part of the

Table 20.1. Measurable Buttons by Material Type and Size

	Lignes																	
	12	14	15	16	18	20	22	24	25	26	28	30	31	32	35	38	40	56	Total
Glass	—	1	2	2	40	2	16	—	—	—	—	2	—	—	1	—	—	—	66
Metal	—	—	—	—	3	9	17	10	2	8	3	9	—	2	1	—	1	1	66
Brass	—	1	—	—	5	—	11	5	—	—	4	9	1	8	1	1	1	—	47
Bone	—	—	—	1	—	1	1	5	—	—	1	—	—	—	—	—	—	—	9
Shell	1	4	—	6	1	1	3	4	—	—	—	1	—	—	—	—	—	—	21
Brass/Glass	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Rubber	—	—	—	—	—	1	1	1	—	—	—	—	—	—	3	—	—	—	6
Total	1	6	2	9	51	14	49	25	2	8	8	21	1	10	6	1	2	1	217

Table 20.2. Distribution of Buttons by Material Type

	Front Gate	Soldiers' Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Glass	11	13	30	2	12	68
Metal (other than brass)	12	26	17	6	7	68
Brass	5	16	10	6	10	47
Bone	3	1	5	—	—	9
Shell	1	3	12	1	5	22
Brass/glass	—	—	2	—	—	2
Rubber	2	—	—	2	2	6
Total	34	59	76	17	36	222

button. This style became common in the mid nineteenth century (Luscomb 1967:175). Five of them are flat, plain white buttons measuring 22 lignes, suggesting use on a blouse or dress. The other two are brown; one is flat and the other spherical. They measure 35 and 18 lignes, respectively. The flat one also has a floral design, suggesting use on a woman's garment.

Bone

Bone buttons were usually made from cattle bones. The bone was boiled, cleaned, and cut into lengthwise slabs from which disks were cut in varying sizes. Most bone buttons were strictly utilitarian in function and were used on as trousers or underwear (Luscomb 1967:25).

Nine bone buttons were recovered from the excavations—five from the officers' quarters, three from the front gate, and one from the soldiers' quarters. They are all unornamented, four-hole, sew-through buttons, with the holes drilled within a recessed center. The sizes range between 16 and 28 lignes; five measure 24 lignes. These sizes are consistent with buttons used on trousers or underwear (Luscomb 1967).

Shell

Twenty-two shell or mother-of-pearl buttons were recovered—13 four-hole, sew-through and eight two-hole, sew-through. These buttons range from 12 to 30 lignes, with the majority clustering between 16 and 24 lignes. These size ranges suggest use on dresses, blouses, and shirts. All are highly polished and exhibit uneven thicknesses. Machine-made "pearl" shell buttons have been produced since 1850 (Luscomb 1967).

Pewter

Seven one-piece, four-hole, sew-through, cast pewter buttons came from the excavations conducted in Room 5 of the soldiers' quarters, Room 5 of the officers' quarters, and Study Units 31 and 34 in the old hospital. Two of the buttons measure 18 lignes and the remaining five

are 20 lignes. These buttons appear to be fly buttons. A mold seam is present on the back. Buttons of this type were manufactured between 1800 and 1860 (Gillio et al. 1980).

Rubber

Six flat, round, hard rubber buttons were recovered. Hard rubber was made by the vulcanization process developed by Charles Goodyear, Jr., and patented in 1851 (Herskovitz 1978:132). Four of the buttons are two-hole, sew-through and two are four-hole, sew-though. The buttons range between 20 and 35 lignes, suggesting use on shirts, blouses, and coats. Two of the buttons bear the stamp N.R.C. Goodyear's P=T. 1851, which is attributed to the Novelty Rubber Company located in New Brunswick, New Jersey, and organized in 1855 (Albert and Kent 1949).

Unknown Metal

One two-hole, sew-through button of an unidentifiable metal was recovered from Room 3 in the officers' quarters. This button measures 28 lignes and probably came from either a pair of trousers or a jacket.

COMPOSITE BUTTONS

Composite buttons are made from more than one structural element. The remaining 112 buttons fall into this category, most of which constitute the military functional group.

Military Buttons

The excavations recovered 99 buttons that are readily identifiable as coming from everyday or formal military uniforms. They are either plain buttons or dress coat, cuff, and helmet buttons (Table 20.3).

The 54 plain buttons were manufactured by crimping two white metal disks together and drilling four holes through the center. Although most are highly corroded, these buttons are estimated to range between 18 and 32 lignes. Buttons of this type were found on flies, suspenders, or trousers and overalls (Figure 20.1).

The 42 dress uniform buttons are constructed of brass with a brass or steel back and a separate eyelet. These buttons have a plano-convex cross-section with a domed front and flat back (Figure 20.2). The front is decorated with an embossed eagle holding an olive branch and arrows in its feet and a lined shield in the center. Thirty-two of these general service buttons dating from 1855 to 1884 were found.

The general service buttons were first authorized by General Order No. 1, Adjutant General's Office on January 20, 1854. This style of button was issued to all enlisted men from 1855 to 1902, with minor changes being made to the eagle emblem in 1884 (Brinckerhoff 1972:5). Two general sizes were made, coat buttons (23 mm diameter) and vest and cuff buttons (ca. 15 mm diameter). The smaller button was also used to attach the chin strap to the kepi or forage cap. Both coat and cuff buttons are included in the Fort Craig assemblage.

Table 20.3. Distribution of Military Buttons

			Line Eagle							
	Plain	General Service	I	D	R	Staff	Eagle Wreath	Crossed Sabers	Eagle Shield	Total
Front Gate	12	4	1	—	—	—	—	—	—	17
Soldiers' Quarters	23	14	2	—	—	—	1	—	—	40
Officers' Quarters	8	6	—	1	—	—	—	—	1	16
New Hospital	6	5	—	—	—	—	—	—	—	11
Old Hospital	5	3	4	—	1	1	—	1	—	15
Total	54	32	7	1	1	1	1	1	1	99

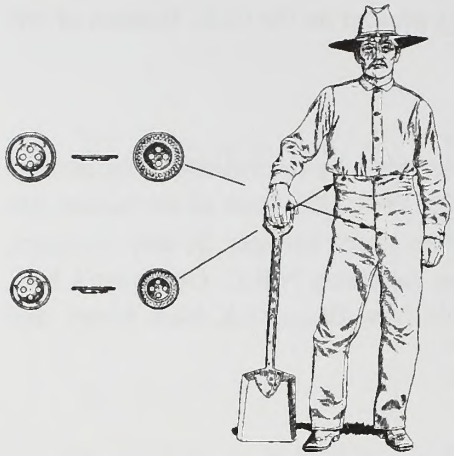


Figure 20.1.
Fly and suspender buttons (from Quartermaster General 1889:95; Steffen 1978:141).

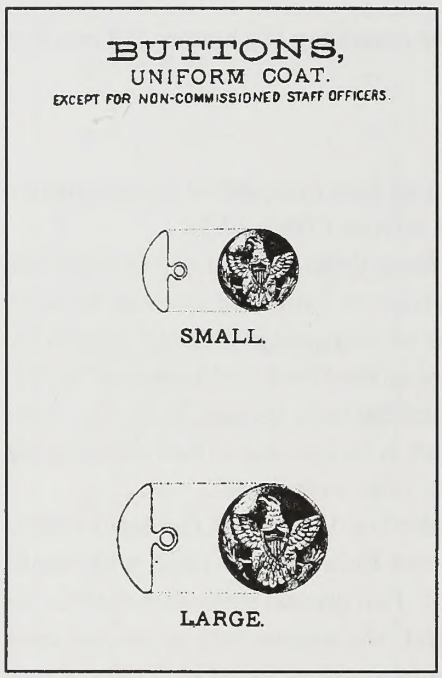


Figure 20.2. *General Service coat and cuff buttons (Quartermaster General 1889:85).*

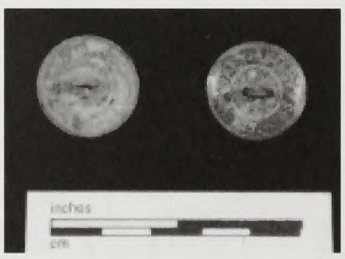


Figure 20.4. *Backstamps: (left) J.H. Wilson, (right) Henry V. Allien.*

Nine of the uniform buttons are of the line eagle device style, a style of button not very different from the general service button except for the presence of an embossed letter in the shield on the eagle's chest. The letter signifies one of the various branches of the Army—"A" for artillery, "D" for dragoons, "I" for infantry, "R" for mounted rifles, and "C" for cavalry. Nine line eagle buttons—seven "I", one "D", and one "R"—were recovered (Figure 20.3b, c, g).

One staff coat button came from the fireplace in Room 8 of the quarters within the old hospital complex (Figure 20.3a). This button was worn by general officers and by staff officers of the medical, quartermaster, and signal branches of the army. It is distinguished from the general service button by a high convex front with a 1- to 2-mm-wide lip or edge running around the outside and a circle of stars surrounding a raised, right-facing eagle and center shield. From 1832 to 1872 the center shield is vertically lined only, but from 1872 to 1902 seven to thirteen small stars were added above the shield (Brinckerhoff 1972). The button found at Fort Craig is of the earlier style.

Seventeen of the dress uniform buttons have manufacturer's backstamps (Figure 20.4, Table 20.4). Most are from the Scovill

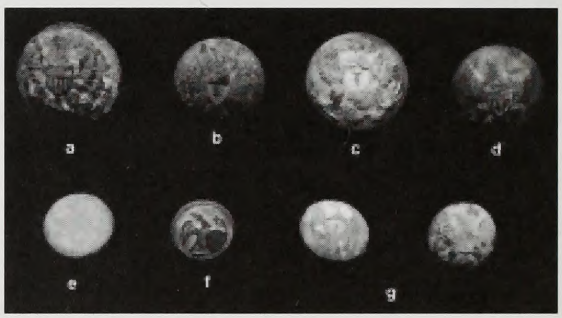


Figure 20.3. *Sample of brass eagle buttons recovered: (a) Staff, (b) R, (c) I, (d) General Service, (e) Eagle and Wreath, (f) Eagle and Shield, (g) I cuff buttons.*

Table 20.4. Manufacturers' Backstamps

Company	Dates	Quantity
HENRY V. ALLIEN & CO. N.Y.	1877–1948	1
EXTRA *QUALITY*	—	2
HORSTMANN & ALLIEN N.Y.	1855–1870	1
HORSTMANN BROS. & CO "PHIL"	1852–1863, 1867–1893	1
W. LAND BOSTON	—	1
SCOVILL & CO.	1840–1850	1
SCOVILL & CO. EXTRA	1840–1850	1
SCOVILL MFG CO. *WATERBURY*	1850–1960	5
SCOVILL MF'G CO. *WATERBURY*	1850–1960	1
L.V.M. SCOVILL MFG WATERBURY	1850–1960	1
WATERBURY BUTTON CO.	1849–?	1
J.H. WILSON. *PHILA.*	1873–1904	1

Sources for dates: Brinckerhoff 1972; Hardesty 1978; Herskovitz 1978; Wilson and Caperton 1977

Company, although various Horstmann Brothers firms are also well represented. These two companies are the most common manufacturers found at other Western forts (Brinckerhoff 1972; Hardesty 1978; Herskovitz 1978; Wilson and Caperton 1977).

The Scovill Manufacturing Company of Waterbury, Connecticut, began making buttons in 1802. In that year, the firm was known as Abel Porter and Company and consisted of Abel Porter, Daniel Clark, Silas Grilley, and Levi Porter. In 1821, the name was changed to Leavenworth, Hayden and Scovill under the ownership of Frederick Leavenworth, David Hayden, and James Mitchell Lamson Scovill. These names or the initials L. H. & S. appeared on the buttons from that time. Six years later, the name was again changed to J. M. L. and W. H. (William H.) Scovill. In 1840, the firm became known as Scovills and Company. Buttons bearing this name probably date from 1840 to 1850. From 1850 on, the firm has been known as the Scovill Manufacturing Company (Luscomb 1967:174).

The Horstmann companies, with headquarters in New York and Philadelphia, were military outfitters dating from the early 1800s to the 1940s. The various firm names found on the backs of buttons were: Wm. H. Horstmann, 1829–1851; Wm. H. Horstmann & Sons, 1843–1859; Horstman Bros. & Co., 1859–1863; Wm. H. Horstmann & Co., 1864–1866; Horstmann Bros. & Co., 1867–1895; and Wm. H. Horstmann Company, 1895–1942 (Luscomb 1967:100).

Horstmann Brothers & Allien was an importer and outfitter company located in New York in the mid-1800s. Uniform buttons bearing this backstamp date from the 1850s to the 1860s (Luscomb 1967:100).

The EXTRA * QUALITY * backstamp also seems to be a common mark on buttons recovered at various Western forts (Herskovitz 1978). The manufacturer of this button is not known, nor are the dates of manufacture.

Two other early-style uniform buttons were found. One is known as the eagle and wreath and came from Room 5 of the soldiers' quarters. This button style was first issued in the 1820s and may have been worn until the early 1860s even though other designs had superseded it (Brinckerhoff 1972:2). The brass front is stamped with an eagle with spread wings and facing his left claw, which is clasping three or more arrows. A large U.S. is in the middle with an oval wreath of olive leaves below the letters. This button is stamped on the back with UNITED STATES (Figure 20.3e).

The second button came from Room 3 in the officers' quarters and is referred to as an Eagle and Shield (Figure 20.3f). This style of button is known to have been used on the 1839 forage cap but was also widely used during the Mexican War and probably into the late 1850s (Brinckerhoff 1972:3).

One cavalry helmet button was found in Room 1 of the old hospital complex. Measuring about 1 inch in diameter, this is a thin, convex, stamped brass button bearing crossed sabers. The 1872 pattern has short, curved, crossed sabers, whereas the 1881 style has straighter and longer crossed sabers. This button is of the 1881 style (Figure 20.5).



Figure 20.5. *Cavalry helmet button.*

Nonmilitary

The 13 buttons within this category are manufactured from glass, metal, and brass and glass. All were placed in the clothing category and most appear to be from women's apparel.

Glass

Two of the three glass buttons are convex and have a wire loop or key shank. Both came from Room 3 in the officers' quarters. One is an irridized black glass measuring 22 lignes and the other is a gray glass measuring 18 lignes. The third button came from Room 1 in the officers' quarters and is a black, 18 ligne, faceted sphere with a wire loop or key shank. All three buttons probably came from blouses or dresses.

Metal

The nine buttons in this group represent several different styles and both dress and utilitarian clothing. Four of the buttons are flat and round with a wire loop or key shank. All four have remnants of a cloth covering. They measure 20, 22, 35, and 40 lignes. The 20 and 22 ligne buttons were probably from women's dresses, whereas the other two probably came from women's jackets or coats. Three were recovered from Room 3 in the officers' quarters and the fourth came from Room 4, also in the officers' quarters.

Two convex buttons with a key shank came from Room 3 in the officers' quarters. One is cloth covered and the other is brass with a small star incised in the center. The cloth-covered button measures 32 lignes and probably was used on a woman's jacket or coat. The brass button is 18 lignes and appears to have come from a woman's blouse or dress.

Two buttons are flat and round and also came from Room 3 in the officers' quarters. The first is made of brass and has a small bar across its recessed center rather than holes. It measures 18 lignes and probably came from a shirt or blouse.

The second was made by crimping two pieces of metal together. Measuring 28 lines, the button is stamped W.H. Reed Patent in two recessed areas on its front. This button probably came from work clothing such as denim pants.

The last metal button is made of brass and is spherical with a shank attachment. This button measures 14 lignes and was probably used on a woman's dress. It was recovered from Stratum 2 in the white ward of the new hospital and may be related to the civilian occupation of the fort or else came from a dress worn by a hospital matron.

Brass/Glass

The two buttons in this group are brass spheres with glass centers, similar to a bullseye. One has a clear glass center, the other a white glass center. Both measure 18 lignes and probably came from women's dresses or blouses. These buttons were recovered from Room 3 in the officers' quarters.

Celluloid Stays

Two celluloid collar stays measuring ½ inch in diameter by ½ inch high were also recovered. One came from below the floor in Room 5 of the soldiers' quarters and the other was found in the white ward of the new hospital. Celluloid is a synthetic, ivory-like material developed in 1869, and items such as these were manufactured until 1902 (Gillio et al. 1980). They were probably used on dress shirts.

SUMMARY

The button assemblage appears to be associated with the military occupation of the fort. The eagle buttons and several of the metal buttons are clearly of military origin, and although none of the other buttons could be identified as military, there is a good possibility that some of the milk glass and bone buttons came from flannel shirts, longjohns, and other articles of clothing that comprise the army-issue uniform. Numerous other buttons are clearly from civilian clothing, especially from women's apparel. They may represent clothing worn by officers' wives, servants, laundresses, or hospital matrons. The collar stays probably came from men's dress shirts.

The flying eagle button and the U.S. wreath button suggest that during the early days of the fort's occupation, new styles of uniforms may not have arrived very promptly. It is also possible that they may be left over from uniforms still being used until new ones were acquired. ✠

Chapter 21

ANALYSIS OF WOOD REMAINS

Richard G. Holloway



WOOD SPECIMENS, TOTALING 208 FRAGMENTS, were collected from the various excavation units within the buildings and rooms investigated during the five seasons of fieldwork. These specimens were from shingles, molding, floorboards, and roofing.

METHODS AND MATERIALS

The samples were in very good condition, and a large quantity of wood was available for examination. Specimens were prepared for microscopic examination following the "snap" method of Leney and Casteel (1975). A fresh, transverse section of the wood was examined from each specimen. A fresh section is necessary because often the vessels and tracheids are obscured by dirt particles. The specimens were supported in a sand-filled dish for microscopic examination, and the anatomical characteristics were tabulated. Examination was conducted with a stereo zoom microscope using 10×–90× magnification. The observations were recorded and a computer-aided wood identification program (Wheeler et al. 1986) was used for the initial identification. These identifications were checked with wood reference specimens curated at the Castetter Laboratory for Ethnobotanical Studies. The use of computer-aided identifications reduced the time required considerably.

Juniperus wood consists entirely of tracheids with no resin canals. The individual tracheids are small with more or less distinct annual rings. *Pinus* wood, however, has resin canals that are visible in transverse section. The canals are surrounded by epithelial cells. The primary local pines from this region of New Mexico are *Pinus ponderosa* and *Pinus edulis*. The resin canals of *Pinus edulis* are generally surrounded by several layers of epithelial cells, and the difference between the two species is distinctive. Thus, on the basis of these characteristics, the majority of the pine specimens recovered compared favorably to *Pinus ponderosa*. This species is common within a short distance for Fort Craig, at higher elevations. *Pinus edulis* is generally a much small tree and its growth form is not conducive to construction materials; thus it is unlikely that specimens of this type would have been used in the construction of the fort. Although in this region pinyon pine is quite common, its suitability as a construction resource is limited.

FRONT GATE

The excavations around the front gate recovered 118 fragments (18 samples) of wood representing 66 pieces of shingles and 52 fragments of board lumber. With the exception of one board fragment collected from a grid on the north side of the trail, the remainder came from the wall fall stratigraphic level of Study Unit 2, the south guardhouse.

The shingle fragments were primarily pine and juniper and ranged in thickness from 3/16 inch to 1/4 inch. Both sides appeared to have been planed smooth. A shingled roof was put on the south guardhouse in the early 1880s (see Chapter 9, this volume).

The board lumber ranged in thickness from 3/4 inch to 1 inch and, for the most part, appeared to be rough-cut lumber. Most of these boards were pine, which may have been used in the roof, on the floor, or as trim.

Of the 18 samples submitted for identification, 17 were either *Juniperus* or *Pinus*. Only a single sample contained wood from a hardwood (Angiosperm), identified as *Populus*. This sample was thought to be from the gate area of the fort. *Populus* is a sturdy wood and would have been locally abundant during the occupation of the fort.

SOLDIERS' QUARTERS

Twenty-nine wood specimens (18 samples) recovered during the excavations within the soldiers' quarters were examined. These specimens came from Study Units 5, 6, 7, 8, and 11. Study Units 11 and 8 were identified as the bakery; the rest were associated with the enlisted men's quarters.

Table 21.1 presents the results of the wood identification from the soldiers' quarters. Of the 18 samples submitted for identification, 17 were either *Juniperus* or *Pinus*. One sample from Study Unit 6 (FS 661) contained both *Pinus* and *Juniperus*. The only other piece of *Juniperus* recovered was one of the three shingles from Study Unit 5.

A single specimen was identified as *Quercus,* and the sample was in good enough condition to identify it as belonging to the red oak group. It is not possible at this time to assign a species name to the specimen. This single specimen of oak was recovered from Study Unit 7. The most common species of *Quercus* in New Mexico belong to the white oak group. Thus, it is likely that at least this sample was imported from outside the local area. Since most of the rest of the specimens are assumed to be locally obtained, the question arises as to what was so important that it required imported wood. The shape and morphology of the wood specimen give no clue as to its function. There was no evidence of staining or other finishing treatment on this wood specimen so it was likely not part of a piece of furniture. Whatever the function of the piece of wood, it was likely important.

Several of the specimens recovered were milled, some with tongue and groove. Records from the occupation of the fort shed some light on the procurement of these wood pieces (see Chapters 9–13).

Two boards and three shingles were obtained from the bakery. Both boards were identified as *Pinus*. Two of the three shingles were made of pine and the third of juniper. It is interesting to speculate as to the different woods being used. Was it simply a case of getting pieces of easily obtained wood to make necessary repairs, or were there other reasons for using different wood types to make shingles? Again, some answers to these questions may be available from further research in the military records.

OFFICERS' QUARTERS

Eleven wood samples recovered during the excavations within the west ell of the east set of officers' quarters were sent for identification. These samples contained 19 specimens from Rooms 1–6.

Table 21.1. Results of Wood Identification from the Excavations at Fort Craig

FS	Study Unit	Room/ Feature	Stratum/ Level	Identification	Comments
SOLDIERS' QUARTERS					
606	5	1	1	*Pinus*	Shingle
616			1	*Juniperus*	Shingle
633			2	*Pinus*	
607			1	*Pinus*	Shingle
641			2	*Pinus*	
652		(fireplace)	2	*Pinus*	
468	6	5	4	*Pinus*	
666			2	*Pinus*	2 pieces, milled
661			2	*Juniperus*	
501			2	*Pinus*	5 pieces
673			2	*Pinus*	2 pieces (two-by-four)
542	7	6	2	*Pinus*	
479			2	*Quercus*	Red oak group
482			2	*Pinus*	
485	8	Bakery	1	*Pinus*	
484			2	*Pinus*	
593	11	Bakery	4	*Pinus*	Charred
589			2	*Pinus*	
OFFICERS' QUARTERS					
797	1	13	3	*Pinus*	Curved piece, very thin
865			3	*Pinus*	
865			3	*Pinus*	Shingles with saw marks; numerous, small resin canals
781	2	14	3	*Pinus*	
725	3	15	3	Conifer	Bark; 8 pieces
843			2	*Pinus*	several saw cuts
748	4	16	3	*Juniperus*	
738	5	17	3	*Juniperus*	2 pieces
859	15	(fireplace)	3	*Pinus*	
835		17	3	*Pinus*	Dry rot
773	6	18	3	*Pinus*	
NEW HOSPITAL					
1326	21	WHITE WARD	2	*Pinus*	board
963			2	*Pinus*	white floor molding
1298			4	conifer	wooden matches
1312			4	*Pinus*	
		(fireplace)	—	conifer, *Pinus*	wooden matches
941	23	BLACK WARD	3	*Pinus*	white molding
1249			4	conifer	wood shavings
1158			2	*Pinus*	white molding
1269			2	*Pinus*	painted board, blue/green
941			3	*Pinus*	white molding
1016			3	*Pinus* cf. *edulis*	wood wedge
1017			3	conifer	wood shavings
1168			3	*Pinus*	board; rough
1308			4	*Pinus*	white, dado end cut
1315			4	conifer, probably *Pinus* (fungal rot)	? large dovetail square block
1321			4	*Pinus*	white, thick molding?

Table 21.1. Continued—

FS	Study Unit	Room/ Feature	Stratum/ Level	Identification	Comments
1260			2	*Robina*	white wood peg
1029			4	*Pinus*	board; white, one edge routed
1320			3	*Pinus*	white molding
1323			3	*Pinus*	white plank
OLD HOSPITAL					
1577	29	1	3	*Pinus*	large number of resin canals
1635			3	*Pinus*	tongue-and-groove flooring
1410	30	2	4	*Pinus*	floorboard
1566	31	3	2	*Pinus*	
1409	36	8	3	*Pinus*	squared timbers
1557			2	*Pinus*	squared timbers, very friable

Of the 11 specimens submitted for identification, nine were identified as *Pinus* and two as *Juniperus* (Table 21.1). One sample from FS 725 consisted of eight pieces of bark. The bark was definitely conifer, and, given the external morphology, I believe it can be assigned to the genus *Pinus*. Several of the specimens recovered during this season were milled, some with tongue and groove.

NEW HOSPITAL

Twenty-one wood specimens recovered during the 1993 excavations were submitted for identification and analysis. These samples came from the two wards (SUs 21 and 23) and from the fireplace in Study Unit 21 (Feature 1).

Of the 21 specimens submitted for identification, 20 were identified as *Pinus* or as an unidentifiable conifer (Table 21.1). The conifer designation was used when the specimens were too small for positive identification or the wood sample was in poor condition. A single specimen (FS 1260) was identified as *Robinia* (New Mexico locust), a member of the Fabaceae family. This specimen was thought to be a wooden peg and was the only hardwood present in these samples. It is interesting that only this wooden peg was made of hardwood. It is likely that these specimens were from a coat rack. The back support was probably made of pine with the individual pegs made of locally available woods, such as *Robina*.

The similar wood structure of the various specimens and the local availability of the identified types indicate that the wood was probably locally procured. Several of the specimens recovered were milled, and many were pieces of molding. Several specimens showed either dado type milling or the rounding of edges similar to the effects of a modern-day router. Fort records indicate that Fort Craig had a fairly well stocked carpentry shop. From the list of tools available from the quartermaster records (see Appendix 3), it is likely that much of the molding work and milling *could* have been done at the fort. It would be very interesting to compare these records with the evidence of woodworking recovered.

The majority of the wood pieces from Study Unit 23 showed evidence of painting. As expected in a hospital, most of the pieces were painted white, although one piece exhibited evidence of either a green or blue color. Only one piece of floor molding from Study Unit 21 showed evidence of having been painted (white). The other two pieces may have also been painted; the lack of evidence may be due simply to erosion of the painted surface. Alternatively, they may not have been painted, although I find this unlikely owing to the protection afforded painted materials.

OLD HOSPITAL

Six wood specimens from the old hospital, consisting of 21 pieces, were examined. These samples came from Study Units 29, 30, 31, and 36 (Table 21.1). All six were identified as *Pinus*. Several of the specimens recovered during the 1994 season were milled, and one sample evidenced tongue-and-groove milling. As noted above, the historical records indicate a carpentry shop was present at the fort, so the manufacture of tongue and groove materials would not be surprising.

Since all specimens were identified as *Pinus*, there is no evidence for selection among the wood types specifically by room function. *Pinus* was locally available, and given the results of previous samples, the wood utilized was primarily local.

CONCLUSIONS

Based on the identification of the various wood samples recovered from across the fort, it is clear that this military post was constructed of locally available materials. No exotic woods were recovered from this suite of samples.

The documented presence of a local lumber mill tends to support this hypothesis. A sawmill owned by Robert Stapleton and E. Montoya was located approximately 25 miles northwest of Fort Craig in a canyon where the "timber consists of Pine, Oaks, Black Walnut, Red Cherry, Cotton Wood, and Piñon".[1] In an 1874 letter sent to the chief quartermaster at Fort Leavenworth regarding repairs at Fort Craig, the acting chief quartermaster for the District of New Mexico reported that lumber "can be procured in the vicinity of Fort Craig".[2] While some of the shingles may have come from Fort Union, a supply wagon containing a shingle machine from Fort Stanton passed through at Fort Craig on its way to Fort Tularosa in the 1870s. It is quite possible that while at Fort Craig, it may have been put to work making shingles (Marion Grinstead, personal communication 1992). ✠

NOTES

1. Report of Captain H. Miller, AQM., to Lt. Col. Clarence Bennett, CO Fort Craig, July 30, 1864, USWD RG 92, QM Roll.

2. July 14, 1874, USWD RG 92, QM Roll.

Chapter 22

TEXTILES

Glenna Dean



EIGHTEEN SAMPLES OF NUMEROUS FRAGMENTS of cloth and thread were recovered from the excavations within the soldiers' quarters, the officers' quarters, the new hospital, and the trash dump behind the old hospital. Identifications of fibers were made by comparison to physical reference specimens with magnifications ranging from 200× to 400×. Weave structures were analyzed under magnifications ranging from 7.5× to 10×, and by reference to textile and weaving books (including McGowan and Waite 1927; Ross 1988; and Tovey 1969).

SOLDIERS' QUARTERS

Ten fragments of at least two different burlap articles came from the excavations in Room 6 of the soldiers' quarters (Study Unit 7). One of the pieces represents a folded fragment (ca. 4 cm by 8 mm) of a coarsely woven textile consistent with the category of burlap (Z-spun, single-ply yarns are woven in plain weave or tabby weave). Where the fabric is not worn, the yarns are thin; where the fabric is worn, the yarns are flattened and wider (range of yarn diameters: 0.75–1.75 mm). The fibers appear to be of vegetal origin and are very brittle. Areas of the fragment are a reddish purple. The weave is too coarse for a flour sack; the fragment may be from a finely woven burlap bag or a coarsely woven feed sack. No selvedges are present.

Four additional fragments of the same type of burlap described above were recovered from an adjacent grid in the same room. The fragments are ca. 4 by 10 cm. The presence of unworn fragments shows that the original weave of the material was open, with ca. 1 mm gaps or holes between adjacent warp and weft yarns. This still corresponds with a textile such as a fine burlap or a coarse feed sack. These gaps have been completely closed in worn areas by the flattened yarns. One end of one worn fragment has the same reddish purple color as seen above. No selvedges are visible.

Also recovered within the same unit were three fragments (ca. 2.5 by 5 cm) of a second type of coarsely woven material consistent with the category of burlap. No selvedges are visible, making it impossible to determine which yarns are the warp and which are the weft. Z-spun single-ply yarns in two thicknesses are woven in plain weave or tabby weave; groups of two thin yarns (probably the warp) are crossed with a single thick yarn (probably the weft). The thin yarns have a diameter of ca. 1 mm in unworn areas, more if worn and flattened. The thick yarns range from a diameter of ca. 1.5 mm in unworn areas to ca. 3.0 mm if worn and flattened. The yarns appear to be spun from vegetal fibers. No stains were seen on any of the

fragments. The weave is much too coarse for a flour sack; a feed or coffee sack is a more likely suggestion.

The last sample from Room 6 consists of large fragments (one each) of both types of burlap described above. The fragments were already in pieces (some as small as 3 cm) when they were randomly folded into a rough square measuring 17 by 11 cm and nearly 1 cm thick near the center. The reddish purple color is also present on fragments of the identical yarn composition and weave in this sample. However, a small area of reddish purple is also present on a fragment of the second style of woven textile. These observations suggest that the reddish purple color is not a dye or remnant of a printed design as might be found on a potato sack; rather, the color may be a stain derived from the use of the textile fragments, for example to apply a colored liquid such as a liniment.

The textiles recovered from the soldiers' quarters appear to have been pieces from burlap bags, which seem to have been used as rags. The use of burlap bags as possible rags implies that there was a limited supply of the necessary materials needed for the repairs, including cloth rags, or perhaps it was easier just to use what was on hand at the time.

OFFICERS' QUARTERS

Two samples of uncharred textiles were recovered from Stratum 3 in Rooms 3 and 6. Two different kinds of textiles were included in the sample recovered from Room 3. The first textile is noticeably maroon and was probably originally red. Microscopic examination of the brittle fibers reveals that the fabric was woven with fine, (probably) linen Z-twist singles, in a plain weave with about two warp and weft yarns per millimeter. The plain weave is interrupted at 0.5 cm intervals with very narrow 2/2 (over two, under two) twill sections to produce a finely striped or banded fabric. A shank-type button ca. 2 cm in diameter has been sewn through at least six layers of the fabric with dark thread that was probably originally blue. Microscopic examination of the thread reveals that it consists of three Z-plied strands of (probably) filament silk. Other fragments of the reddish fabric show turned edges that have been topstitched with the same dark thread at a gauge of six stitches per centimeter, probably by machine. This fabric may represent a military dress coat or, more probably, a women's jacket.

The second textile is brown and much more coarsely woven. The dark brown, brittle warp threads are very fine (about 0.33 mm in diameter) and set widely at about 9 yarns/cm. Microscopic analysis reveals that these yarns are Z-twisted singles, probably linen. The much thicker weft yarn is a lighter brown and about 1 mm in diameter. Microscopic analysis reveals that the weft yarn is Z-twisted wool singles. The textile is woven with about 9 warp yarns/cm and about 7 weft yarns/cm and is about 3 mm thick. The construction suggests a use as lining or padding.

The sample recovered from Room 6 consists of many uncharred fragments of coarsely woven brown cloth identical to the second textile recovered from Room 3. This spatial distribution, coupled with the construction details of the wool and (probably linen) material, suggests that the textile may have been used as a padding under rugs, carpets, or other floor covering.

NEW HOSPITAL

Five samples of thread and textiles came from the excavations within the two wards, three from the buffalo soldiers' ward and two from the white soldiers' ward. All five came from the floor and below floor strata.

The three samples collected from the black ward consist of two different types of fabric. One of the samples was very small, very brittle fragments of an uncharred knitted fabric made of some vegetal fiber, probably linen. The very fine, unplied (singles) yarn of ca. 0.20 mm diameter is made of Z-spun fibers. The fabric was dyed and now appears purplish black. Knitting was probably done by machine at a gauge of about 10 stitches/cm. The fabric is very fine and may have been used for an undershirt or other underwear.

The other two samples are fragments of the same plain-woven fabric; I could not determine if the fabric was charred or simply very dark and brittle. With Z-spun cotton singles yarn ca. 0.25 mm in diameter, the cloth was woven with ca. 20 yarns/cm in one direction and ca. 24 yarns/cm in the other direction. No selvedges are present. The material could have been used for a handkerchief or bandana, as relatively heavy shirt material, for muslin bandages, or possibly as a covering for the ceiling, as remembered by an officer's granddaughter for another Fort Craig location (Peggy Gerow, personal communication 1993).

The two samples recovered from the white soldiers' ward were of two different styles. One consists of a large, loosely folded fragment of uncharred cotton cloth woven in a 1/2 (under one, over two) twill. The cloth is woven of Z-spun singles yarn ca. 0.20 mm in diameter, set at ca. 48 warp yarns/cm and ca. 56 weft yarns/cm. No selvedges were visible. The twill diagonal is woven with the direction of the yarn twist ("Z"), that is, from lower left to upper right. Despite the fineness of the yarns, the 1/2 twill yields a coarse-looking fabric with a pronounced, almost corded, diagonal rib on one side. The other face is a sparse, "spotted" 2/1 twill.

The fabric was dyed and now appears purple. It is too lightweight to have been used for trousers or a skirt, and is probably too heavy for use as a handkerchief or a bandana. The fabric may have been used as a jacket lining, for interfacing, or for trim.

The second sample consists of four folded fragments of blackish brown fabric whose yarns appear as a brilliant turquoise blue under 200× magnification. The individual filaments of the Z-spun singles yarn are nearly uniform in diameter, yet patchy substances are adhering to them. The yarns might be spun silk made from shorter filaments of cultivated (*Bombyx mori*) silk, or they might be made from "wild" or *tussah* silk (from one of several other species of silk worm). The yarns are approximately 0.5 mm in diameter, and the fabric is woven with ca. 10 warp yarns/cm and ca. 18 weft yarns/cm in a balanced 2/2 (under two, over two) twill. The twill diagonal runs with the twist of the yarns, from lower left to upper right.

One of the fragments has a short (1 cm) line of four stitches made in a light brown, two-ply thread composed of tightly Z-spun, S-plied fibers that are probably linen. The diameter of the sewing thread is about 0.25 mm. The presence of only one thread, doubling back on itself on the underside of the fabric, indicates that the sewing was done by hand in a backstitch.

All four fragments of cloth are uniformly roughened and matted on both surfaces as if from considerable abrasion during use. The relatively heavy fabric may have been used as jacket material, as part of a suit or tie, or may have come from the hem of a petticoat or skirt.

TRASH DUMP BEHIND THE OLD HOSPITAL

The one sample recovered from the trash dump consists of a small, loosely tangled mass of silk threads. Despite their age the threads are still quite lustrous, and microscopy at 200× to 400× reveals the fibers to be reeled, cultivated silk. This type of silk thread is produced by unwinding the continuous filaments of a number of silk worm cocoons simultaneously, a process that essentially "glues" the filaments together into a coherent thread without being spun. Progressively thicker threads are formed by reeling together sets of fine threads. Because the long filaments are unbroken and essentially untwisted, reeled silk is the most lustrous of all the silk yarns.

Two colors of silk threads were noted, a black thread that is actually green in some places and blue in others under microscopy, and a uniformly yellow thread. Both color threads have a diameter of ca. 0.15 mm.

The presence of the threads as a loose tangle suggests that they originate as lint from a finely woven silk cloth like a handkerchief or scarf. Such an origin would also explain the presence of two colors of yarn. The sampling locus suggests that some medical use could have been made of the fine yarns, perhaps as sutures. In this case, no reasons for the different colors can be suggested, as both color yarns are essentially the same size or thickness. ✠

Chapter 23

LEATHER & MISCELLANEOUS ARTIFACTS

Jeanne A. Schutt & Peggy A. Gerow



THIS CHAPTER EXAMINES the remaining 388 artifacts, which by nature of their material composition did not readily fit into the other artifact sections (Table 23.1). These items represent eleven functional categories (Table 23.2).

LEATHER

Jeanne A. Schutt

The excavations recovered 278 leather artifacts. Identifiable pieces represent portions of footwear, tack, and belts. These fragments represent four functional categories: clothing, military, transportation, and indeterminate.

Front Gate

Thirty-six fragments of leather came from the excavations in the vicinity of the front gate. The majority appear to be portions of shoes or boots, with at least seven different items represented. One strap fragment is also present, and seven fragments could not be identified. The lower portion of a boot, which appears to represent a post-1872 officer's boot, was recovered in situ in Study Unit 1. Before discussing the artifact assemblage, a brief discussion on the changes in military footwear is presented.

The most significant changes in military clothing occurred after the Civil War. These changes largely resulted from the unsatisfactory performance of various clothing during the war and from inadequate supplies.

The types of footgear and methods of production also changed dramatically after the Civil War. Boots and shoes were produced at military facilities (e.g., Schuylkill Arsenal) between the Mexican War and the Civil War (Brinckerhoff 1976:11). The materials were purchased by the government and were assembled under military supervision. This system proved inadequate during the Civil War as supply requirements could not be met. As a result, civilian contracts were issued to meet these demands. In 1874 Congress established Fort Leavenworth, Kansas, as a military prison dedicated to the production of army shoes (Brinckerhoff 1976:12). In 1877 the Secretary of War directed that at least 75 prisoners, in addition to civilian employees, produce footgear.

The most significant changes in footgear design came in the early 1870s. In April of 1872 new, brass-screwed boots and shoes were submitted to the Secretary of War for approval, resulting in the recommendation that 3,000 pairs of boots and 2,000 pairs of shoes be manufactured and tested by officers in

Table 23.1. Distribution of Leather and Miscellaneous Artifacts

	Front Gate	Soldier's Quarters	Officers' Quarters	New Hospital	Old Hospital	Total
Leather	36	174	15	41	12	278
Cork	—	3	4	3	2	12
Bone	1	—	1	—	2	4
Wood	1	3	1	7	1	13
Rubber	1	—	7	6	1	15
Sponge	—	—	—	—	1	1
Stone	4	7	—	—	1	12
Paper	1	—	8	1	1	11
Organic	—	11	10	—	8	29
Horn	—	4	2	—	—	6
Chalk	—	1	—	—	—	1
Cloth	—	—	5	—	—	5
Shell	1	—	—	—	—	1
Total	45	203	53	58	29	388

the service (Billings 1875:li). The tests resulted in a favorable evaluation so the brass-screwed boot was issued to the troops.

In 1875, General Order No. 6 was issued from the Adjutant General's Office asking for "a report on the clothing and accoutrements now issued (recent improvements) and used by enlisted men of the Army, with regard to their sufficiency, suitability to their purpose, and quantity, and their effects, if any, on the health of the wearers, with remarks and recommendations" (Billings 1875:xlviii). It became clear that two distinct uniforms, one for the northern climates and another for temperate climates, were needed.

Evaluations of the new footgear over the next few years were, in general, favorable, although there were complaints that the screws would pierce the inner lining of the boot. The percentage of defective boots remained small, however, when compared with the overall number of brass-screwed boots and shoes issued by the army (Billings 1875:lii).

	Boots	Shoes
Purchased	109,990	175,403
On hand, March 31, 1875	15,974	39,417
Total issued by the army	94,016	135,986

The chief quartermaster of the Military Division of the Missouri was directed to investigate local complaints about the shoes and boots. This was the only division where complaints were received. The quartermaster reported that defective boots and shoes were found at eight posts in the area (Billings 1875:li).

	Boots	Shoes
Fort Larned, Kansas	1	2
Fort Lyon, Colorado Territory	5	15
Fort Davis, Texas	2	20
Cheyenne Agency, Dakota Territory	–	26
Fort Leavenworth, Kansas	5	41
Camp Douglas, Utah Territory	8	16
Camp Supply, Indian Territory	5	–
Fort Dodge, Kansas	1	–
Total Defective	27	120

Table 23.2. Functional Distribution of Leather and Miscellaneous Artifacts

	Household/								Food			
	Furniture	Indulgences	Mess	Communication	Military	Personal	Clothing	Transportation	Refuse	Prehistoric	Indeterminate	Total
Leather	—	—	—	—	70	—	5	7	—	—	196	278
Cork	—	12	—	—	—	—	—	—	—	—	—	12
Bone	—	—	2	—	—	2	—	—	—	—	—	4
Wood	1	—	8	—	—	—	—	—	—	—	4	13
Rubber	—	—	—	2	—	12	—	—	—	—	1	15
Sponge	—	—	1	—	—	—	—	—	—	—	—	1
Stone	—	—	—	—	—	1	—	—	—	5	6	12
Paper	—	—	—	3	—	—	—	—	—	—	8	11
Horn	—	—	—	—	—	6	—	—	—	—	—	6
Chalk	—	—	—	1	—	—	—	—	—	—	—	1
Cloth	—	—	—	—	5	—	—	—	—	—	—	5
Shell	—	—	—	—	—	—	—	—	—	—	1	1
Organic	—	—	—	—	—	—	—	—	29	—	—	29
Total	1	12	11	6	75	21	5	7	29	5	216	388

The defective boots were replaced by the contractors, and it was determined that the defect was the result of badly cut screws and unseasoned boots. After 1874 screws were periodically inspected at factories and a surplus stock of shoes and boots was maintained to replace defective footgear.

Brinckerhoff (1976:12) describes the changes that improved the new calvary boots and infantry shoes. The new boots were 15½ inches high in front and 14 inches high in back (Figure 23.1). The circumference was 14¾ inches on a size No. 8. These boots had double soles that were fastened together with a 12½ gauge brass wire screw (Estabrook and Wise patent brass clinching screw). The screws had five spaces in the threads for every two inches of wire. The upper leather was oak-tanned from fresh hides and the soles were made from oak-tanned, dry South American hides. No split leather was used.

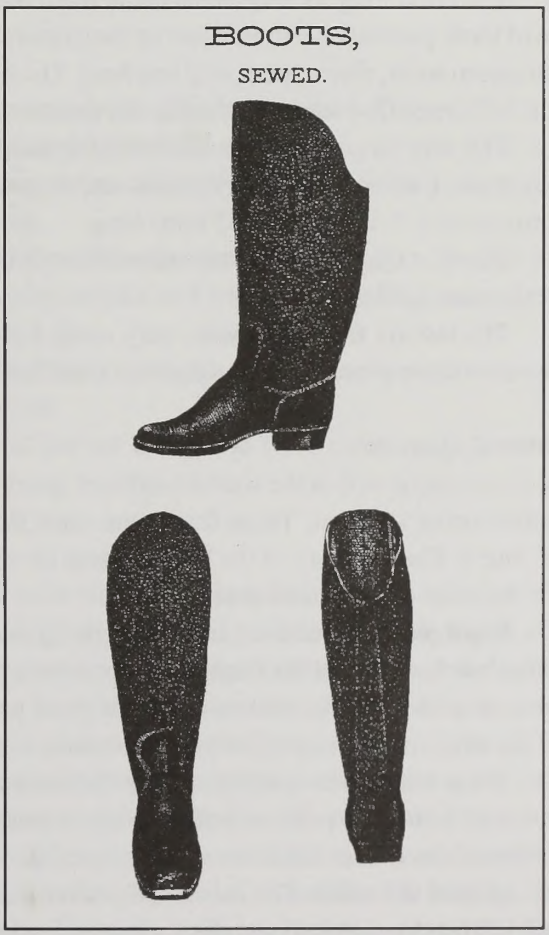


Figure 23.1. *Post-1872 cavalry boot (from Quartermaster General 1889:299)*

The most obvious advantage of the new boot was the high front, which afforded the rider greater protection. The wider top made it easier to tuck the pant legs inside.

As noted above, fragments of this type of boot were recovered in situ from one of the grids in Study Unit 1. Although only the lower portion of the boot remains, its characteristics indicate that it is of post-1872 manufacture. The sole, the counter (quarter), and the upper remain (Figure 23.2). The counter is cut straight and is attached to the top or leg of the boot with small tacks. The sole measures 10 inches long and 3½ inches wide across the ball of the foot.

Two other fragments of leather were recovered from this same unit. These fragments exhibited cut edges and were of full thickness (.105 inch, 2.67 mm). Evidence of stitching was identified on one fragment. These fragments may represent portions of the boot described above.

Two additional fragmentary pieces of leather were recovered from an adjacent grid. One piece is of full thickness (.111 inch, 2.83 mm) and exhibits evidence of stitching. The second appears to be a portion of a leather strap measuring .758 inch (19.26 mm) wide. This strap had stitching along both lateral sides.



Figure 23.2. *Lower portion of boot recovered from Study Unit 1 in front of the guardhouse.*

The remaining 31 fragments came from Study Unit 2 on the south side of the walking trail. Twenty-five of these pieces were from boots or shoes and six were indeterminate. The boot/shoe fragments consisted of nineteen soles, five uppers, and one heel. The heel was made of two full-thickness pieces of leather (.148 inch, 3.77 mm) that were attached to the counter (quarter) with small square tacks (.781 inch, 19.85 mm).

The sole fragments were all full-thickness leather ranging between 0.92 and 1.85 inches (2.33–4.69 mm) thick. One exhibited tack holes and a second had three square tacks still in place. The tacks are approximately 0.376 inch (9.55 mm) long.

The five upper pieces were manufactured from thin, split leather. Two had stitching holes and a third had shoelace holes.

The last six fragments were very small full-thickness pieces measuring 0.092 inch (2.33 mm) thick. They may have come from footgear but their small size made their function difficult to ascertain.

Soldiers' Quarters

The excavations within the western enlisted quarters yielded a total of 174 fragments of leather representing a minimum of 10 items. These fragments came from four different areas within the quarters: Study Units 5, 6, 7, and 9. The majority of the leather items (n = 170) were so fragmentary and in such poor condition that their function could not be determined.

Eight pieces of leather came from the limited excavations conducted within the squad room (Room 1, Study Unit 5). Three of the fragments represent a part of a Jefferson brogan shoe, with two pieces exhibiting remnants of the turned, sewn sole and one piece probably coming from the upper. These fragments are black and the stitching appears to be machine-made, indicating post-1860s manufacture.

These shoes were a common item for soldiers in the West. After the Civil War, the government had a surplus of 1,500,000 pairs of Jefferson shoes and 435,000 pairs of boots, many of which were issued to the frontier soldiers. The shoes were constructed of black leather with the rough side out, tied with laces, and came up over the ankle. The earlier soles were hand-sewn to the uppers, but the shoes purchased during the war used machine-placed wooden pegs and machine-sewn thread. Until the late 1870s, boots and shoes for soldiers were made under contract by civilian producers (Brinckerhoff 1976). Jefferson shoes have been recovered from other frontier posts, such as Fort Churchill and Fort Bowie (Hardesty 1978; Herskovitz 1978).

The remaining five fragments are one piece of full-thickness, hard leather with evidence of some stitching and four fragments of split, soft leather. The piece exhibiting stitching may also be from a shoe or boot but this is speculative owing to its highly fragmentary condition.

The excavations within Room 5 (Study Unit 6) recovered 81 pieces. Seventy-eight of these fragments came the southeastern corner and may be remnants of a hat or some type of pouch. These pieces are dark brown, and the body fragments measure 2 mm thick. The edge pieces are folded over, creating a thickness of 4–5 mm, and exhibit a double row of loose stitching ¼ inch apart. There are eight stitches to the inch. Several fragments of a dark brown to black, silklike band similar to an interior hat band were associated with this item. Unfortunately, both the leather and the silky fragments were so badly deteriorated that the specific function of this item cannot be ascertained.

The other three items were found in the stratum below the floor. One is a portion of a leather strap attached to a buckle and the other two are cut strips of uneven, full-thickness leather. The buckle measures 1¾ inch by 1½ inch and the strap is ¾ inch wide. The two leather strips measure between ⅛ inch and ¼ inch wide and are approximately 8 inches long.

Eighty-three pieces of leather came from Room 6 (Study Unit 7), 82 of which were unidentifiable pieces. The remaining piece was a round, soft disc measuring ⅞ inch thick. It is not known how this item was used.

Only one piece of split leather came from the trash scatter. No identifiable characteristics (e.g., stitching, holes, eyelets) were noted.

Officers' Quarters

Fifteen pieces of leather were recovered from the various rooms in the officers' quarters. They appear to be primarily fragments of shoes and straps. The five strap fragments measure 1 inch wide by ⅛ inch thick with lengths ranging between 2½ inches and 7 inches. Only one piece exhibited stitching. These pieces could represent portions of harnesses or straps for field equipment.

The five shoe fragments are all of polished leather and exhibit stitching along the edges. Several also have eyelets. All five fragments are 1/16 inch thick with various lengths and widths. These fragments appear to be from bootees.

One other shoe fragment recovered was that of a heel from a woman's shoe. This piece measures 1½ inch long by 1½ inch wide at its widest point by 3/16 inch thick.

The remaining four fragments consisted of a piece of leather lacing and three indeterminate scraps. The piece of lacing is ⅛ inch thick and 3/16 inch wide.

New Hospital

Leather fragments were recovered from five of the study units in the new hospital. For the most part this they represent fragments of boots, saddles, and straps. Six grids contained polished, full-thickness shoe leather with evidence of stitching. An additional eight grids contained other shoe leather that lacked stitching holes. The vast majority of this leather was recovered from the white ward and the excavated trash.

Other parts of footwear include a heel that was recovered from under the floor in the white ward. The heel was constructed of four full-thickness pieces of leather nailed together by hand with round metal nails. Shoe nails were first manufactured in England in 1812 and soon replaced the wooden peg. These early nails were square, cut iron or brass. Around 1829 round nails of other metals were used. Nails became obsolete in 1862 with the patent improvements on Blake's sewing machine developed by Colonel Gordon McKay. This patent allowed seams to be made completely around the shoe. The nails in the heel indicate a pre-1862 date, suggesting it was associated with the early occupation of the fort.

Portions of leather straps and ties were recovered from the two wards and the hallway. It is unclear

what these straps and ties were used for.

Pieces of saddle leather were recovered from the white ward, the trash dump, and the trench outside the ward. One piece of girth strap was found in the trash. Otherwise the fragments are not diagnostic.

Old Hospital

Twelve leather fragments came from three of the rooms within the old hospital complex. More than half ($n = 8$) represented pieces from footwear. Seven of the pieces were portions of soles—five were from Room 2 and two came from Room 4. These measured 1/16 inch (2 mm) thick.

The other piece was a boot heel with iron nails. This measured 1 3/16 inch (30 mm) thick. The iron nails indicate a pre-1862 date of manufacture, which corresponds with the early years of the old hospital.

One fragment may be part of a shoelace, but this is speculative owing to its short length. This piece is square-cut and measures 3/16 inch wide (4.5 mm) by 1/8 inch (3 mm) thick.

The remaining three fragments appear to be from a belt. These pieces are 1 7/8 inch (35 mm) wide by 3/16 inch thick (4.5 mm). The edges are beveled but there are no holes.

Summary

The majority of leather artifacts are unidentifiable fragments. The three footwear fragments, the boot, and the strap fragments recovered from the front gate and enlisted men's quarters are clearly associated with the military occupation of the fort. With the exception of the heel to a woman's shoe, more than likely the other boot/shoe fragments are military related. Both early and later styles of footwear are represented. The stratigraphic contexts of most of these fragments suggests that there was not much lag time in the army's shipping of goods to the fort.

MISCELLANEOUS ARTIFACTS

Peggy A. Gerow

The artifacts placed within this grouping represent a variety of items and functions. Albeit a tiny assemblage, the information garnered from the identifiable objects provides a glimpse of everyday life of the fort's occupants. These artifacts are discussed by their material composition.

Wood

Excluding the wood fragments recovered from the construction of the buildings (see Chapter 21), 13 wooden artifacts came from the various excavation areas. These items represent three functional categories—household/mess, furniture, and indeterminate.

One artifact came from the vicinity of the front gate. This was a tapered utensil handle measuring 6.3 inches long, 0.8 inch in diameter at the butt end, and 0.5 inch at the lower end. This handle may have been polished. The wood species was not identified.

Three wooden items were recovered from the soldiers' quarters—two hand-carved pieces similar to a stylus or peg and a small wedge. The two peglike pieces measure 1/2 inch in diameter with lengths of 3 5/8 inches and 5 inches. Both are faceted and exhibit a point at one end. One came from below the floor in Room 5 and the other from the workroom of the bakery. The functions of these two items are not known.

The wedge, also recovered from the bakery workroom, is made of pine and measures 7 1/8 inches long by 2 inches wide. The thickness ranges from 1 1/8 inch on the thick side to 1/8 inch on the thin end.

A tapered wooden peg came from Room 6 in the officers' quarters. This item was painted blue and measured 2 3/4 inches long and had a 5/8-inch diameter at the untapered end. This peg was probably used to

hang a coat or some other item.

The remaining wooden artifacts consist of seven matches and one disc. This latter item, from the new hospital, measures 1¾ inch in diameter by 3/16 inch thick. A hole was drilled in the center. Its function is unknown. Six of the matches came from around the fireplace in the black ward in the new hospital and one was found in Room 2 in the old hospital. All had been used.

European-style friction matches were first produced in the United States in 1835 by Ezekial Byam of Chelmsford, Massachusetts, and William A. Clark of Woodbridge, Connecticut. The first American match patent was granted a year later to Alonzo Dwight Phillips of Springfield, Massachusetts, for a match constructed of phosphorus, chalk, and glue placed on a card of pine veneer. A year or two after Phillip's patent, matches were made in blocks of 50, 100, or 144 matches. Under this process, a block of match-length wood was split or sawed perpendicularly without separating the individual matches, which remained attached at one end of the block. These matches were dipped in sulfur and tipped with a phosphorus composition that ignited when struck on a rough surface (Brown 1995).

Rubber

Fifteen rubber artifacts were recovered; 14 were made out of hard, black, vulcanized rubber. Most of these items were used in hair grooming—four comb teeth, two comb fragments, three hair pins, and three fragments of hair pin tines. The comb teeth were flat and tapered and ranged from 1 to 1 1/16 inch long by 3/16 inch wide at the top, and 1/16 inch thick. The comb teeth came from the front gate, the new hospital, and the old hospital.

The hair pins were three-pronged (Figure 23.3, bottom). Two measured 2 7/8 inches long by 7/16 inch wide at the top and the third was 2 5/8 inches long by ½ inch wide at the top. These pins and the tine fragments were recovered from the officers' quarters and the trash dump east of the old hospital.

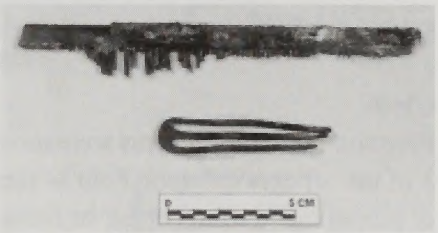


Figure 23.3. *Comb and hairpin.*

The two comb fragments came from the new hospital—one from the black ward and the other from the trench between the old and new hospitals. The one from the ward consists of hard rubber teeth inserted into a metal strip measuring 6½ inches long (Figure 23.3, top). Most of the teeth are broken. The other comb fragment is the top of the comb only. No teeth remain.

The remaining two vulcanized rubber artifacts are pieces of a black pen holder recovered from Rooms 1 and 3 of the officers' quarters. Both are tapered at the end and faceted along the length of the stylus. One measures 2 5/8 inches long by 3/16 inch thick at the untapered end; the other is a 1¼-inch-long fragment.

The last artifact in this material group is made of soft rubber and appears to fit on a thumb (Figure 23.4). Though flattened, it is conical with a height of 1 3/8 inch. Small parallel lines extend from the base to the top. The tip is broken off. This artifact may have been used to turn pages.



Figure 23.4. *Unknown rubber piece.*

Cork

Twelve corks from alcohol and patent extract/medicine bottles were recovered from all excavated proveniences except the front gate area. They were tapered and ranged in length from ½ to 1 3/8 inch with top diameters between 3/16 and 11/16 inch. The bottom diameters were from 5/16 to ¾ inch. Three of the corks had been sliced at the top, which may indicate reuse for something else or to facilitate opening the bottle.

Bone

Four miscellaneous bone artifacts came from the front gate, the officers' quarters, and the old hospital. One is an end fragment of a bone comb recovered from Study Unit 1 near the front gate. This small fragment measures 0.02 inch thick and appears to be hand-carved.

The handle of a bone toothbrush was found below the floor in Room 5 of the officers' quarters (Figure 23.5, top). Measuring 4 3/16 inches long, this item is curved and highly polished.

The last two items are fragments of bone handles recovered in the old hospital. The first is a bone-handled fork found in Room 1. The handle is two-sided, tapered, and attached to the fork with five pins (Figure 23.5, middle). It measures 3 3/16 inches long, 5/8 inch wide at the top, and 1/2 inch wide at the bottom. Some polishing of the handle is evident. The fork itself is metal and highly corroded.

The second handle came from Room 2 and is a small fragment from one side of the utensil (Figure 23.5, bottom). It measures 3/16 inch thick and has beveled lateral edges. A small brass rivet is still in place in the center of the fragment.



Figure 23.5. *Bone artifacts—toothbrush handle, cutlery handles.*

Horn

The six horn artifacts are comb teeth measuring 1 1/4 inch long by 0.04–0.06 inch thick. Four came from the soldiers' quarters and two were found in the officers' quarters.

Cloth

Five non-textile cloth items were recovered from beneath the floor in Room 3 of the officers quarters. Four of these represented fragments of braiding or piping made from copper or brass threads. Two measured 3/4 inch wide (Figure 23.6, bottom) and two were 1/16 inch wide. These items were probably used on uniform pants and jackets.

The last item is an embroidered bugle insignia also made from brass threads. It measures 1 3/4 inch long by 7/8 inch wide (Figure 23.6, top). This insignia was sewn on the front of a cap; its style represented the infantry.

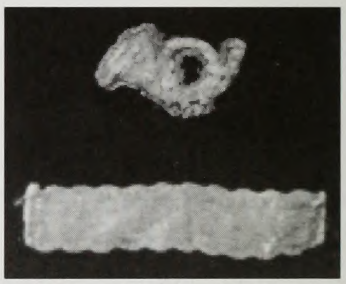


Figure 23.6. *Embroidered bugle insignia and piping.*

Paper

The paper artifacts consist of two fragments of rag paper, eight pieces of brown paper, and a small corner of a German-language newspaper. The rag paper fragments came from the front gate and the old hospital. The one from the front gate measured 1 inch long by 7/8 inch wide at its widest point and contained the number 19 in what appears to be a box with the number 5 in a box underneath.

The piece from the old hospital was blank with blue lines. It may have come from a notebook or ledger book. The brown paper fragments appear to be cigarette-like papers, but this is speculative. They were recovered from below the floor in Room 6 of the officers' quarters.

Fragments of a German newspaper wadded inside a piece of blue cloth were found under the floor in the outside corner of the fireplace in the white ward (Figure 23.7). One of the legible lines on a fragment states that the "deadline is the 30th of April 1872," suggesting that this paper dates before April 30, 1872. A translation of the fragments is given in Table 23.3. Several of the pieces appear to be part of a serial, while others are portions of birth and death announcements.

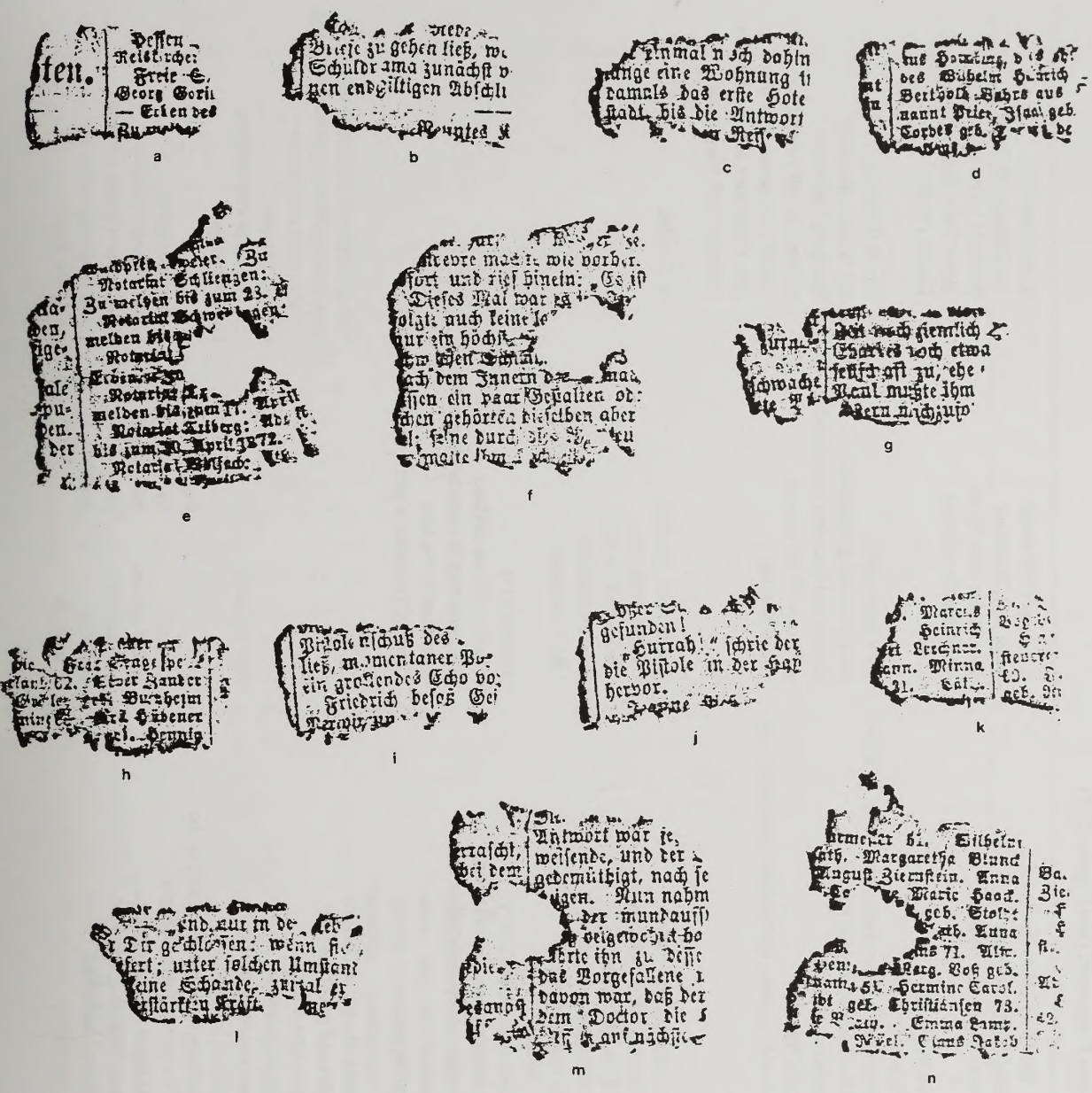


Figure 23.7. Fragments of a German newspaper.

Foreign-born enlisted men and other personnel were quite common at Western forts in the years from 1865 through the 1890s. These men came primarily from Ireland, Germany, and England with lesser numbers from Canada, Scotland, France, and Switzerland. Many of these men had served in the army at home, and enlistment in the U.S. Army offered a familiar routine in a new country. For other immigrant recruits, enlistment in the army provided a job and enabled them to learn English and the customs of the United States (Rickey 1963:17–18). Like at other western forts, Fort Craig had its share of immigrant soldiers (see Appendix 4), several of whom came from Germany and Prussia. The 1870 census lists nine soldiers born in Prussia and 21 born in Germany. In addition the post surgeon, H. G. Federman, was born in Prussia and two hotel keepers were born in Germany. In fact, Dr. Federman was at the post from June to November 1872 and the newspaper could have belonged to him.

Table 23.3. Translation of the German Newspaper Fragments (see Figure 23.7)

a. -ten. ? Hessen
Reiskirchen...
Freie S...
Georg Gori...
- Ecken de...
Zu melden

Hesse (the area around Frankfurt)
Reise, travel, journey; kirchen, church
Freie, free
Georg Gori...
- corner of
To apply for

b. Briefe zu gehen liess, w...
Schuldrama zunächst v...
-nen endgiltigen Abschl...

Briefe, letters
zu gehen, to go
lassen (liess is past participle), to let or allow
Schul, school; drama, acting
zunächst, first
endgiltigen ?
Abschl..., close, completion, conclusion

c. einmal noch dahin
lange eine Wohnung
damals das erste Hote...
-stadt bis die Antwort
... Reise...

once more there
long a dwelling/apartment
then/at that time that first (hotel?)
-city to/until the answer
... trip/journey

d. aus Hamburg,
des Wilhelm Heinrich
Berthold Vahre aus
-nannt Peter, Isaa(c?) geb.
Eordes (?) geb.

out of Hamburg,
the William Heinrich
Berthold Varhe out
nennen, to call (-nannt
could be genannt, past part.)
geb. is standard abbreviation for
geboren, born (as in nee)

e. Notariat Schliengen:
Zu melden bis zum 23
Notariat Sch...
melden bis zum
Notariat
Erben. Zu
Notariat
melden bis zum 17. Abril
Notariat Triberg: Ab
bis zum 30 Abril 1872.
Notariat Wolsach:

Notariat is a notary's office
Schliengen, Sch..., Triberg, Wolsach, etc.,
are town names
zu melden is to apply for
bis zum 30 Abril 1872 means the deadline
is the 30th of April 1872

f. ... machte wie vorher
-furt und reis hinein: Es
Dieses Mal war es
...solgte auch keine
nur ein höchst
... Sch...
Nach dem Innern des
...issen ein paar Gestalten od...
...schen gehören dieselben aber
seine durch
ma?te ihm

make like (do as) before
-furt and travel here: It
This time it was
(?) also no/none
only the highest
(?)
To/toward the inner (center) of the
(?) a pair of figures/shapes
(?) heard the same but
your through
(?) for him/to him

g. Zeit noch ziernlich
Charles noch etwa
...sellschaft zu, ehe
Raul musste ihm
Okern nachzuso...

Time still (?)
Charles still/yet perhaps
(Ge)sellschaft is company, ehe is before
Raul must to/for him
Okern (?) (nachzu is prefix for follow/after)

h. illegible

Table 23.3. Continued—

i. Pistolenschuss des liess, momentaner V... ein grollendes Echo ba... Friedrich befass Ges...	j. gesunden! Hurrah! schrie der die Pistole in der han... hervor.	k. Marcus Heinrich ert Lerchner -mann Minna 21. Cath.	Vogthe Ha steucran? ?9. geb.	l. und nur in de... Dir geschlossen: wenn sie -efert; unter solchen Umständ seine Schande zumal er ...erstärkten Kraft
Pistol shot of the let/allowed (past tense of lassen), momentary a resentful echo Frederick touched	get well! Hurrah! cried the the pistol in the hand (?) out/forth	geb. is "born"		and only in the You closed/enclosed/united: when/if she/they ?; under such conditions their shame/disgrace/dishonor especially added/reinforced strength/power
m. Antwort war weisende, und der gedemüthigt, nach se... ...eigen. Nun nahm der mundaufs... beigewohnt ha... ?ührte ihn zu desse das Vorgefallene davon war, dass der dem Doctor die ...ess ? auf nachste	n. urmeister 51. Wilhelm... Cath. Margaretha Blund August Ziernstein. Anna Ca(therine?) Marie Haad beg. Stolht ? Anna. ? 71. Alfr. . . . Marg. Voss geb. . . . Hermine Carol, ... geb. Christiansen 73. ... Emma Lamp. ... Claus Jakob			
Answer was show/way/wise, and the humiliated, to/toward (?). Only name the world/out/ witnessed (?) to/for him to (?) The incident about it/from it was, that the of the Doctor the (?) out of (the) next				

Sponge

A small piece of brown sponge came from Room 3 in the old hospital. This appeared to be the type of sponge used for household cleaning rather than surgical procedures.

Chalk

One piece of white chalk came from beneath the floor in Room 5 of the soldiers' quarters. It may have been used to write on a slate board.

Shell

The one shell artifact recovered consists of a white olivella-type shell tinkler. This item came from Study Unit 1 in the vicinity of the front gate. It may have been used as adornment on clothing, but this is speculative.

Stone

Eleven stone artifacts, five of which are prehistoric lithics, were recovered from the front gate, soldiers' quarters, and new hospital. Aside from the lithics, most of these items are unidentifiable. One artifact appears to be a triangular slate fragment with a finished, beveled edge which may have fit into a frame of some sort. The small piece measures 1 1/16 inch along the finished edged and 1 inch across its widest point. It may have come from a slate board or possibly from a billiard table, but it is much too small to ascertain its origin. This artifact came from the surface collection in the front of the fort. Slate fragments from a billiard table were recovered from Fort Bowie (Herskovitz 1978).

Billiards appears to have been a popular leisure activity for officers. William Woods Averell, a brevet second lieutenant in Company F of the Regiment of Mounted Riflemen stationed at Fort Craig in 1857, noted in his journal that he played billiards in a small building in the northwest corner of the fort (Eckert and Amato 1978). Presumably this building was the old adjutant's office.

Another mention of billiards was by Lt. Col. August V. Kautz, post commander from July to October 1869. In his diary he stated that he played billiards in the afternoons with some of the officers (Wallace 1975). The billiards table was located in the sutler's store in the southeast corner of the fort.

Three other stone artifacts all came from Study Unit 2 inside the front gate. Two of these artifacts appear to be from some type of rectangular rod with rounded edges. Both fragments are 1 inch in length and ¼ inch thick. Although they do not fit together, they do appear to be from the same item. The last of the stone artifacts is an arc-shaped rod fragment measuring 1 inch in length, ¼ inch wide, and ⅛ inch high at the center.

The five prehistoric lithics and two other stone items were recovered from the soldiers' quarters. The latter two items are a possible whetstone and an unknown polished fragment. The whetstone came from the workroom in the bakery and measures 2¾ inches long, 1 inch wide, and ¼ inch thick. Possible knife marks are visible on one side. The size of this item suggests it was used to sharpen a small knife or pocketknife.

The unknown polished fragment came from below the floor in Room 5 and is made from a white, marble-like rock with black inclusions. This item is conical and measures ¾ inch long and ¼ inch thick. Its greatest diameter is ¾ inch and tapers to a rounded point that is ⅜ inch wide. A small, V-shaped notch is present in the center of the widest edge. The function of this artifact is unknown.

The five prehistoric lithics consist of three gray chert flakes, a limestone flake, and a bipolar obsidian flake. All but the obsidian flake lack dorsal cortex. The obsidian flake exhibits 90% dorsal cortex. There is no evidence of use or retouch on any of these artifacts. All came from the roof/wall fall strata of the soldiers' quarters and were probably intermixed with the dirt and gravel put on the roof.

The last stone artifact came from Room 5 of the old hospital and is a fragment of a rod with a tapered end. This piece measures 2¾ inches long with a diameter of 3/16 inch. The function of this piece is unclear.

Organic

Twenty-nine organic items come from the soldiers' quarters, the officers' quarters, and the old hospital: 19 peach pits, five apricot pits, two nut shells, two corncobs, and one squash seed. One of the corncobs was found in the southern wall of Room 5 in the soldiers' quarters and appears to have been used to plug a hole prior to replastering. This medial section of a 16-row corncob with 14 cupules per row measures 60 mm long.

Summary

The 110 artifacts comprising this assemblage provide some interesting clues to everyday life at the fort. The presence of peach and apricot pits in the quarters indicate that fresh fruit was seasonally available. These items may have been purchased from the post sutler or obtained or traded from a local source. In the excavations conducted at Paraje, a small town about 10 miles to the south of Fort Craig, Boyd (1986) notes the recovery of several peach pits. Peach pits were also recovered from the excavations at Fort Bowie (Herskovitz 1978) and Fort Cummings (Staski 1995).

The one squash seed recovered from the officer's quarters suggests that fresh vegetables supplemented the officers' diet. It is not known if this vegetable was grown at the fort or purchased from the sutler or a local merchant. The presence of the hoe blade suggests that one of the officers' families may have maintained a small garden.

The use of a corncob to plug a hole in the wall in the soldiers' quarters indicates expedient reuse. At the time of the repair either (1) there was a limited supply of the necessary materials or (2) it was easier just to use what was on hand at the time.

Other artifacts within the miscellaneous grouping are clearly gender-specific. The hairpins belonged to women whereas the piping, insignia, and possible cigarette papers belonged to men. The combs, comb teeth, and toothbrush handle could belong to either and indicate a concern for personal hygiene.

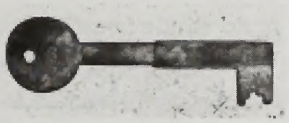
The three utensil handles may have come from cutlery purchased and distributed by the army quartermaster, but this is speculative. More than likely these items represent portions of personal household goods and not army-issued items. Both wood- and bone-handled utensils were recovered at Fort Bowie (Herskovitz 1978).

While there is evidence that prehistoric components are present under the commanding officers' house and outside the fort (Gerow 1988; Gosset and Gosset 1985; Marshall and Walt 1984); the lithic artifacts do not indicate that the enlisted quarters were constructed on an earlier site. More than likely, these artifacts came from the gravels used on the roof. ✠

Chapter 24

FAUNAL ANALYSIS

Marie E. Brown, Kenneth L. Brown, & Martha Binford



RESEARCH ORIENTATION

THE VERTEBRATE FAUNAL ASSEMBLAGE RECOVERED from the excavations at Fort Craig totals 2,368 specimens. In this chapter the assemblages from the five field seasons are described and compared. These assemblages provide a data base for addressing several research issues centered around describing and explaining any variations in the vertebrate faunal assemblages. In other words, how do the assemblages reflect cultural behavior (e.g., subsistence patterns, hunting, butchering, bone technology)? This general, encompassing question can be divided into several specific questions:

1. What taxa were included in the diet of the enlisted men, officers, and hospital patients? Are there differences in the taxa identified and in the number of taxa identified? Can the refuse midden beneath the new hospital and the hospital row be assigned to enlisted men, or officers, or both?

2. What animal elements or portions are represented in the assemblages recovered from the excavations? Are the meat cuts represented in the hospital refuse more similar to those found near the enlisted men's or the officers' quarters? Are any patterns evident in the saw and chop marks that might indicate skilled vs. unskilled butchers?

3. What modified bones are present? What do the modified bones represent with respect to their function?

RESEARCH METHODS

Numerical codes for several variables were recorded for each bone specimen (i.e., a bone fragment or a complete bone) by the faunal analysts. Each faunal specimen was identified to the lowest possible taxonomic level (e.g., order, family, genus, species, animal size). Other variables recorded for this faunal analysis include (1) element, (2) side, (3) portion, (4) age criteria (e.g., fused, unfused, tooth wear), (5) bone condition, (6) presence of gnawing, (7) presence of burning, (8) butchering information, and (9) bone modification. Identifications of taxon, element, side, and portion were accomplished primarily with the aid of comparative specimens in the faunal analysts' possession.

After the variables were recorded, the NISP (number of identified specimens) for each identified taxon was generated with the aid of a computer. In addition, MNI (minimum number of individuals) values

were calculated for the various assemblages as a whole and for each study unit defined for each season. The MNI was determined for each identified genus and species. In addition to provenience, the variables used to calculate MNI values included sides and portions of the most numerous elements for each identified genus and species as well as the ages represented in each taxon based on the degree of bone fusion, tooth wear, and bone porosity of obviously immature individuals (e.g., fetal, neonatal). The NISP and MNI values form the basis for the faunal assemblage descriptions and interpretations.

The MNI is the number of animals of an identified taxon necessary to account for all the recovered bones of that taxon (Shotwell 1955:272). Although used by paleontologists as early as the 1920s (see Grayson 1973:433, 1984:27–28), the method for determining MNI was first used in American archeology by White (1953). White's technique has been improved over the years (Bokonyi 1970; Chaplin 1971; Grayson 1973, 1979, 1984), but the methods utilized for determining MNI can still yield varying results for the same assemblage (see Casteel 1977a, 1977b; Grayson 1973, 1978, 1979, 1984; Horton 1984; Ringrose 1993:126–128). As a result, some researchers see little value in the use of MNI (e.g., Casteel 1977b; Turner 1980). As suggested by Horton (1984:255), "there is no single 'best' method, since the one that is chosen depends upon the result that is desired, and on the particular features of the site and excavation."

With these drawbacks in mind, MNI values are presented as a quantitative counterbalance to the NISP values. In addition to NISP, MNI values are used in this study because they are relatively unaffected by differential fragmentation among species and samples and are, therefore, better for assuring comparability among indices computed for different samples (Cruz-Uribe 1988:180; Klein and Cruz-Uribe 1984). Although Grayson (1984) has objections to the use of MNI, not all levels of aggregation to obtain MNI values are likely to be sensible according to the site contexts and research questions (Ringrose 1993:128).

Various methods have been presented for determining the relative importance or abundance of identified taxa (Grayson 1984; Martin 1986; Smith 1975, 1979; White 1953). Critiques of the various methods have also been made (Casteel 1978; Grayson 1984; Stewart and Stahl 1977; Uerpmann 1973). The methods for ascertaining relative taxonomic abundances for the assemblages in this study are based on percentages of NISP and/or MNI values.

NATURAL HISTORY AND HISTORICAL BACKGROUND

The following are descriptions of the natural history of the vertebrate genera or species identified within the faunal assemblages. Except for Catostomidae (suckers) and Cyprinidae (carps and minnows), higher taxonomic classifications (e.g., family, order) are not discussed. Table 24.1 presents the preferred habitats of the specific taxa. Information in this section will be used in succeeding sections concerning the vertebrate faunal remains.

OSTEICHTHYES – BONY FISH

Family Catostomidae (Suckers)

Six species of sucker have inhabited the middle Rio Grande drainage: the river carpsucker (*Carpiodes carpio*), the white sucker (*Catostomus commersoni*), the Rio Grande sucker (*Catostomus plebeius*), the blue sucker (*Cycleptus elongatus*), the smallmouth buffalo (*Ictiobus bubalus*), and the gray redhorse (*Moxostoma congestum*). Of these six, the species most common to the Fort Craig area are the river carpsucker and the smallmouth buffalo.

The river carpsucker is a bottom-dwelling schooling species that seldom exceeds 35 to 58 cm in length and 1.7 kg in weight and is one of the most abundant fish species in the Rio Grande. It inhabits quiet areas of rivers, large creeks, and lakes. Main channels are generally avoided. Spawning begins in early spring and continues until midsummer. The river carpsucker feeds on microscopic organisms, such as diatoms,

Table 24.1. Preferred Habitats of Identified Taxa for the Fort Craig Assemblage

Taxon	AQ	RP	GR	DS	SL	PJ	CF	PL	AG	DO
Catostomidae (suckers)	X	—	—	—	—	—	—	—	—	—
Cyprinidae (carps, minnows)	X	—	—	—	—	—	—	—	—	—
Medium-size fish	X	—	—	—	—	—	—	—	—	—
Trionyx spiniferus (spiny softshell turtle)	X	—	—	—	—	—	—	—	—	—
Buteo sp. (buzzard hawk)	—	—	X	X	X	X	—	—	S	—
Zenaida macroura (mourning dove)	—	X	X	X	X	X	X	—	P	—
Gallus gallus (domesticated chicken)	—	—	—	—	—	—	—	—	—	X
Sylvilagus sp. (cottontail)	—	X	X	X	X	X	X	X	P	—
Lepus californicus (black-tailed jackrabbit)	—	—	X	X	X	X	—	—	P	—
Sus scrofa (domestic pig)	—	—	—	—	—	—	—	—	—	X
Bos taurus (cattle)	—	—	—	—	—	—	—	—	—	X
Bison/Bos (bison/cattle)	—	—	X	—	—	—	—	—	—	X
Ovis aries (domestic sheep)	—	—	—	—	—	—	—	—	—	X
Capra hircus (domestic goat)	—	—	—	—	—	—	—	—	—	X
Ovis/Capra (sheep/goat)	—	—	—	—	—	—	—	—	—	X

Key: AQ = Aquatic; RP = Riparian; GR = Grassland; DS = Desertscrub; SL = Scrubland; PJ = Pinyon/Juniper; CF = Coniferous forest; PL = Parkland; AG = Agriculture; DO = Domesticated; P = Primary; S = Secondary

desmids, algae, Protozoa, Chironomidae, and microcrustaceans. Although this sucker is presently considered by many to be a "trash" fish, it is edible. In some areas of the country it is marketed as "cold water buffalo" (Cross 1967:178–179; Page and Burr 1991:166; Sublette et al. 1990:194–196).

The smallmouth buffalo (*Ictiobus bubalus*), a bottom-dweller which rarely exceeds 47 cm in length, inhabits larger pools of higher-order rivers with low-velocity currents. It currently occurs in the Rio Grande in Sierra and Doña Ana counties in pools, oxbows, and backwater areas. Clean to moderately turbid, deep, warm waters with a silt bottom and abundant aquatic vegetation are preferred. Spawning occurs from April to September, primarily in areas of inundated terrestrial vegetation. Feeding generally occurs in shallow shoreline areas. Young smallmouth buffalo feed on cladocerans, copepods, and algae, whereas adults are primarily bottom feeders that consume a variety of larval insects, crustaceans, algae, other invertebrates, and plants (Cross 1967:174; Page and Burr 1991:165; Sublette et al. 1990:218–222).

Fish remains were recovered during each of the five excavation seasons at Fort Craig. The paucity of fish remains suggests they were consumed as secondary food resources on an irregular basis by the fort personnel. Excavations at other New Mexico forts, such as Fort Sumner and Fort Fillmore, have also yielded fish remains (Olsen and Wilson 1976:27; Parmalee 1967:44–45). Fish probably provided a welcome change from the usual daily military rations. Seines, dip nets, traps, and/or hooks may have been used to procure fish from the Rio Grande.

Family Cyprinidae (Carps and Minnows)

Cyprinids are generally small fish (<10 cm long). Several species, however, can attain lengths greater than 10 cm. The recovered specimen is from a fish greater than 10 cm in length. Although some introduced cyprinid species can attain large sizes (e.g., common carp [*Cyprinus carpio*]), their introduction into the area generally postdates the occupation of the fort. As a result, they are not considered in the following discussion.

Of the 12 species (four of which are currently extirpated) representing 10 genera native to the Rio Grande in the general vicinity of Fort Craig, only three species are potentially large enough to account for the specimen. The Rio Grande chub (*Gila pandora*) occurs in pools of small rivers and small to moderate

streams with aquatic vegetation. Spawning takes place in spring and early summer. This fish is a midwater carnivore that consumes zooplankton, aquatic insects, and young fish (Page and Burr 1991:75, Map 82; Sublette et al. 1990:125). The flathead chub (*Platygobio gracilis*) is found in rivers and large streams with moderate to strong currents and shifting sand bottoms. The water is generally highly turbid. Spawning occurs in summer. Although the flathead chub is considered omnivorous, it primarily consumes terrestrial insects (Page and Burr 1991:103; Sublette et al. 1990:171). The longnose dace (*Rhinichthys cataractae*) prefers gravel riffles of small to medium-size rivers. Spawning extends from early spring to early summer. This cyprinid is an omnivorous bottom-feeder that eats aquatic insects, algae, and plant material (Page and Burr 1991:102, Map 111; Sublette et al. 1990:178; Thompson 1985:92–93).

REPTILIA – REPTILES

Family Trionychidae (Softshell Turtles)

Trionyx spiniferus (Spiny Softshell)

The spiny softshell, which attains a length of 13 to 46 cm, is the only species of softshell turtle in the Fort Craig area. It dwells in a variety of aquatic habitats (e.g., oxbows, lakes, ponds, swift-flowing rivers, marshy creeks) with soft bottoms and some aquatic vegetation, preferring sandbars and mud flats. It is highly aquatic, often lying buried in the soft bottom of shallow water with only the head visible. Because it is prone to desiccation, the softshell seldom travels overland. Nesting occurs from May to August. A clutch of 4 to 32 eggs is laid in a nest dug in sand or soft soil near water. Hibernation occurs in burrows dug into mud bottoms. Although this turtle consumes some vegetation, it is predominantly carnivorous. Its diet consists of aquatic insects, mollusks, crayfish, fish, tadpoles, frogs, and earthworms (Degenhardt and Christiansen 1974:42–44; Ernst and Barbour 1972:261–265).

The flesh of the spiny softshell is considered excellent (Ernst and Barbour 1972:265). This turtle, therefore, was probably procured as a secondary food resource by fort personnel. Although it is very aquatic, this turtle is extremely fast and agile both in water and on land and is very difficult to catch by hand. Special techniques may have been necessary to procure this species. The presence of softshell turtle remains at Fort Sumner (Olsen and Wilson 1976:23, 27) and Fort Fillmore (Parmalee 1967:44–45) suggest the flesh of these turtles may have been worth the effort required to procure them.

AVES – BIRDS

Family Phasianidae (Gallinaceous or Fowl-like Birds)

Gallus gallus (Domestic Chicken)

The domestic chicken (*Gallus gallus*) was probably introduced into New Mexico by the Spanish colonists of the Oñate expedition in 1598. Chickens were often kept at military posts (e.g., Olsen and Wilson 1976:22, 25, 30; Parmalee 1967:44–45) as a ready source of meat and eggs. Each of the five excavation seasons at Fort Craig yielded chicken remains. Chicken eggs were available for purchase by married officers at the sutler's store or in San Marcial at a cost of 50 cents per dozen (Stanley 1963:119). During one four-year period, only 8 chickens and 17.5 dozen eggs were consumed at Fort Craig (Billings 1875:xlv).

Meleagris gallopavo (Turkey)

Although the domestic turkey may have been available to the soldiers at Fort Craig, the one turkey specimen recovered is probably that of Merriam's wild turkey (*M. g. merriami*), which occurs in the Transition and Upper Sonoran zones of the mountains of New Mexico. The current permanent range of this turkey includes the project area. However, it has been extirpated throughout much of its former range. The wild turkey is the largest upland game bird in the country. Merriam's wild turkey inhabits mountain forests and woodlands of the Southwest. It primarily dwells at elevations between 6000 and 12,000 ft, rarely occurring below 6000 ft

(Bailey 1928:231–233; Ligon 1946:1–3). The ponderosa pine, a source of mast and its favorite roosting tree, is an essential component of its permanent habitat, and surface water is a range requirement (Ligon 1946:2). Dense, brushy habitats are avoided. This bird is a swift runner and often roosts in trees for protection.

Although not technically a migratory bird, it has distinct summer and winter ranges. Turkeys live in family groups during the summer and congregate into larger flocks during the late fall, when they begin their journey to the lower-elevation (Upper Sonoran) winter range. The formation of these larger flocks is probably a response to the availability of acorns and other mast at this time. Nesting usually occurs in coniferous forests (Transition zone), at elevations between 7,000 and 9,500 ft. The nest often consists of a shallow, leaf-lined depression at the base of a tree in an open or semi-open area that affords the hen a clear view of her surroundings. The egg-laying season begins in early May. Clutches usually consist of 9 to 12 eggs. Oak mast (acorns), pinyon nuts, and juniper berries are important components of the wild turkey's diet. Other nuts, seeds, wild fruits, and insects are also consumed. Predators include coyotes, bobcats, eagles, horned owls, foxes, skunks, badgers, crows, and ravens (Bailey 1928:231–237; Johnsgard 1979:125; Ligon 1946, 1961:102–104; Martin et al. 1951:107–108; Peterson 1990:158, Map 99; Schorger 1966).

The wild turkey was important in the diet of the early European colonists of North America. Eventually, the wild turkey became the "king" of the upland game birds, remaining the leading food and sport species until its numbers were greatly reduced by over-hunting (Martin et al. 1951:107). The taste of the turkey's flesh is affected by the type of food it consumes. In the Southwest, turkeys that consume quantities of pinyon nuts are said to have a delicate flavor (Schorger 1966:372).

Callipepla squamata (Scaled Quail)

The permanent range of the scaled quail (*Callipepla squamata*) includes the Fort Craig area. However, destruction of desert grasslands in recent times has resulted in the extirpation of the scaled quail in portions of its range (Johnsgard 1988:53; Rea 1973:327). This ground-dwelling gamebird only inhabits arid grasslands and semi-deserts. Areas with overhead cover (e.g., shrubs) are preferred. Forbs and shrubs provide nesting cover. Fairly large coveys of up to 150 individuals (average of 31.2) occur during the non-breeding period. Where surface water is available, populations tend to be higher. The breeding season extends from June to September or October and is associated with summer and fall rainfall. A clutch of 9 to 20 eggs (usually 12 to 14) is laid in a nest scratched in the ground under shrubs or other vegetational cover. This bird primarily consumes weed and grass seeds, including those of cultivated plants (e.g., wheat, oats, sorghum). A significant portion of its diet, however, is composed of insects (Johnsgard 1979:120, 1988:18, 51–53; Martin et al. 1951:102–103; Peterson 1990:166, Map 102; Rue 1973:289–301; Udvardy 1977:534).

Callipepla gambelii (Gambel's Quail)

The Gambel's quail (*Callipepla gambelii*), a permanent resident within the project area, prefers desert habitats dominated by mesquite and other desert shrubs. Fairly small coveys of up to 40 individuals (average of 12.5) occur during the non-breeding period and disperse in pairs during the nesting season. Egg-laying commences in late April. A clutch of usually 10 to 16 eggs is laid in a nest scratched in the ground under vegetational cover. The nests are subject to high predation. This bird primarily consumes seeds and is attracted to cultivated fields (e.g., corn) (Johnsgard 1988:18, 54–56; Martin et al. 1951:104–105; Peterson 1990:166, Map 103; Rue 1973:302–307; Udvardy 1977:505–506).

Family Columbidae (Pigeons, Doves)

Zenaldura macroura (Mourning Dove)

Fort Craig is within the breeding range of the mourning dove (*Zenaidura macroura*). In fact, its breeding range includes all 48 contiguous states. It is a common summer resident but an uncommon winter resident in

the project area. Migrations occur in early fall and early spring. The preferred habitat of this upland gamebird consists of deserts, grasslands, cultivated fields, and brushy and wooded areas. The latter are used for nesting, while the grasslands and cultivated fields are used for feeding. Two eggs are laid in a loosely constructed twig nest, located in a tree, in a bush, or on the ground. The breeding season is long, with a peak from March to mid-September. Therefore, nesting occurs several times during the breeding season. This helps the species to maintain its numbers even though it is subject to high predation. It consumes wild and cultivated seeds and grain (Johnsgard 1979:186; Martin et al. 1951:111–112; Peterson 1990:208, Map 187; Rue 1973:381–390; Udvardy 1977:544). The mourning dove was an occasional food resource at the fort. Its presence in the faunal assemblage is attributed to opportunistic hunting of wild game in the vicinity of the fort.

Family Accipitridae (Kites, Eagles, Hawks, Harriers)

Buteo spp. (Buzzard Hawks)

Five species of *Buteo* occur within the Fort Craig area. Swainson's hawk (*B. swainsoni*) breeds within the region. Its habitat includes plains, prairies, open hills, and dry meadows with few trees. Two to four eggs are laid in a stick nest constructed in a tree, bush, or large cactus, or on a cliff. It subsists mainly on rodents (Johnsgard 1979:86–87; Peterson 1990:174, Map 77; Udvardy 1977:538).

The breeding range of the zone-tailed hawk (*B. albonotatus*) includes the Fort Craig area. Its habitat includes desert mountains, canyons, low scrub, and riparian woodlands. Usually two or three eggs are laid in a large platform nest constructed of sticks and green branches in a tall tree or on a cliff. Its diet includes rodents, rabbits, and small birds (Peterson 1990:178; Udvardy 1977:640).

The red-tailed hawk (*B. jamaicensis*) occurs in the region as a permanent resident. A variety of habitats are occupied: semi-desert open country, mountains, plains, woodlands, and prairie groves. "Its most characteristic habitat is natural savanna or its man-made counterpart, farmlands with woods" (Udvardy 1977:539). It requires both extensive open habitat for hunting and clusters of tall trees for nesting. One to four eggs are laid in a large stick nest in a tree or on a cliff. It eats rodents, lizards, and other ground-dwelling animals (Johnsgard 1979:83–84; Peterson 1990:174, Map 78; Udvardy 1977:539).

Fort Craig is near the boundary of the permanent and winter ranges of the ferruginous hawk (*B. regalis*). Its habitat consists of plains, prairies, brushy open country, and badlands. Three to five eggs are laid in a nest made of roots, sticks, or sagebrush. Although usually located in trees, nests are also constructed in bushes or on the ground on a ledge. Its diet consists mainly of prairie dogs, ground squirrels, and rabbits (Johnsgard 1979:87–88; Peterson 1990:176, Map 79; Udvardy 1977:539–540).

Fort Craig is within the winter range of the rough-legged hawk (*B. lagopus*). Its winter habitat is composed of open fields, plains, and marshes with elevated lookout posts. Within its winter range, this hawk subsists mainly on larger rodents and upland birds (Peterson 1990:176, Map 80; Udvardy 1977:766).

The cultural context of the single recovered hawk leg element is problematical. Raptors were probably not consumed by fort personnel. Therefore, the presence of a hawk element within the assemblage may be natural. Its recovery from the white ward, however, suggests a cultural association. The hawk may have been killed as it hunted prey within the vicinity of the fort. On the other hand, it may have been a pet. An officer at Fort Sumner had two pet hawks (Olsen and Wilson 1976:28).

Family Gruidae (Cranes)

Grus spp. (Crane)

The project area is within the winter range of the whooping crane (*Grus americana*), an endangered species, and the sandhill crane (*G. canadensis*). The crane specimens recovered could not be identified as to species. The habitat of these marshbirds consists of marshes, prairies, fields, and tundra. Their preferred habitat is comprised of shallow water and mud flats near grain fields. During migration or winter, cranes often feed in

grain fields. Spring migration usually begins in late March and the fall migration commences in mid-September. Breeding occurs in northern marshes in April and May. A clutch of usually two eggs is laid in a bulky nest constructed in an isolated, open wet area, such as a small island or above water level. Whenever available, cranes consume cultivated grains such as corn, wheat, oats, rice, and sorghum. In addition, its diet includes seeds of wild plants, stems, roots, tubers, grasshoppers, beetles, caterpillars, snails, fish, frogs, lizards, snakes, and mice (Emslie 1981:318; Martin et al. 1951:80–81; Peterson 1990:116, Map 112; Rue 1973:395–400; Udvardy 1977:425–426).

Family Anatidae (Web-footed Waterfowl)

Fort Craig is located within the Central Flyway. Approximately 76,000–150,000 geese and 226,000–750,000 ducks use this portion of the migration corridor annually (Bellrose 1976:Figs. 1-2 and 1-3). The high frequency of waterfowl remains recovered during the project suggests they were the focus of subsistence strategies.

Tribe Anserini (Geese)

The project area is within the wintering grounds of the snow goose (*Chen caerulescens*) and the Canada goose (*Branta canadensis*). The habitat of the snow goose consists of marshes, ponds, bays, and grain fields. Nests are sparsely lined with down and are located on the tundra. Clutches consist of four to eight eggs. The snow goose is a grazing bird that consumes marsh vegetation. In addition, it eats cultivated grains such as corn (Peterson 1990:38, Map 31; Rue 1973:41–46; Udvardy 1977:443; Whitney 1978:59).

The Canada goose, on the other hand, is a year-round resident, which is within the range of the intermountain population of this species. The habitat of this population consists of marshes and stream channels. Breeding begins in early March. Nesting sites of the waterfowl include marshes, the tops of muskrat houses, islands, and cliffs. Nests are lined with down. Most clutches contain 4 to 7 eggs. Molting occurs about a month after the young hatch. The Canada goose is attracted to cultivated fields where it feeds on grains such as corn. In addition, grasses and marsh plants are also consumed (Bellrose 1976:141–164; Peterson 1990:40, Map 35; Rue 1973:7–17).

Subfamily Anatinae (Ducks)

Anas spp. (Surface-feeding Ducks)

Presently, six species of *Anas* can be found within the Fort Craig area. The green-winged teal (*A. crecca*), the mallard (*A. platyrhynchos*), the northern pintail (*A. acuta*), the northern shoveler (*A. clypeata*), and the gadwall (*A. strepera*) are year-round residents. The area is within the breeding range of the cinnamon teal (*A. cyanoptera*), within the winter range of the American wigeon (*A. americana*) (Peterson 1990:Maps 37–44).

All members of the genus *Anas* are surface-feeding ducks. Habitats include marshes, ponds, lakes, rivers, and bays. Except for the American wigeon which builds its nest at a distance from water, nests are located near water and are constructed of grass, leaves, and other vegetation and are lined with down. Usually, eight to twelve eggs are laid. The young are flightless for about two months. The males generally molt during the incubation period and the females molt after the young are capable of flight. These ducks are primarily vegetarian. Their diet consists of the seeds, stems, and leafy parts of aquatic and marsh plants, grasses, acorns, and cultivated grains (Bellrose 1976:198–216, 218-226, 229–243, 262–300; Martin et al. 1951:56–57, 59–65; Peterson 1990:44, 46, 48; Rue 1973:53–62, 69–112; Udvardy 1977:435).

MAMMILIA – MAMMALS

Family Leporidae (Rabbits, Hares)

Sylvilagus spp. (Cottontails)

Two species of this small game mammal may be represented within the faunal assemblage. The range of the eastern cottontail (*Sylvilagus floridanus*) includes Fort Craig (Cockrum and Petryszyn 1992:41). In New

Mexico, however, it primarily inhabits montane forests (Findley 1987:57; Findley et al. 1975:83, 87). This cottontail prefers open forests, forest edges, and open brushy areas. It is also found in pinyon-juniper woodland (Hoffmeister 1986:131; Schwartz and Schwartz 1981:103). The majority of the cottontail remains, however, are probably those of the desert cottontail (*S. auduboni*) which occurs throughout New Mexico, inhabiting deserts, grasslands, brushy areas, and riparian zones. It is found primarily at elevations below the coniferous forests (Chapman and Willner 1978:2; Cockrum 1982:132–133; Findley et al. 1975:89; Hoffmeister 1986:135–136; Zeveloff 1988:89, 92).

As a genus, cottontails are adapted to diverse habitats. "Cottontails are found in a wide variety of disturbed, successional, and transitional habitats often characterized by weedy forbs and bunch-type perennial grasses with an abundance of well-distributed escape sites, often dense, thorny, low-growing, woody perennials" (Chapman et al. 1982:103). They also frequent cultivated fields and the dense vegetation adjoining cultivated fields (Chapman 1975:2; Davis 1974:239–240; Hoffmeister 1986:136; Zeveloff 1988:87). Cottontails are normally active early in the morning and at night. The eastern cottontail primarily consumes both herbaceous and woody plants. The desert cottontail subsists mainly on grasses, forbs, cacti, and shrubs. Cultivated plants, including corn, are also eaten. In addition, cottontail eat their own soft, moist droppings which are a source of vitamin B (Chapman et al. 1980:4–5, 1982:101–103; Clark and Stromberg 1987:79, 81; Hoffmeister 1986:134, 137; Ingles 1941:229–230; Schwartz and Schwartz 1981:105; Zeveloff 1988:88, 92).

Predation is the primary regulator of cottontail abundance. Although the cottontail is an important prey for a variety of predators (e.g., bobcats, coyotes, foxes, raccoons, skunks, raptors, snakes) (Chapman et al. 1982:106–107; Clark and Stromberg 1987:79; Ingles 1941:236; Zeveloff 1988:88, 92), it is an r-selected mammal. It has a high reproductive rate. Breeding generally occurs from mid- or late winter through late summer. A single female may have as many as six litters, of usually three to six individuals, per year. The first and last litters of the year tend to be smaller. Female desert cottontail born in the spring are capable of breeding during their first summer. This offsets the low litter sizes. Cottontail young are altricial (immature) at birth. They are born hairless and blind in a pear-shaped, fur-lined nest dug about 15 to 25 cm into the ground (Chapman et al. 1982:94–97; Clark and Stromberg 1987:79–81; Cockrum 1982:128; Davis 1974:241–242; Hoffmeister 1986:131, 137; Ingles 1941:242; Zeveloff 1988:89, 93).

Cottontail have been hunted for food and other uses by many peoples. They can be successfully procured by individual hunters. These leporids do not usually venture far from cover, and when alarmed they seek shelter in brush or in burrows. Other escape behaviors consist of "freezing," running, and dodging (Ingles 1941:237–238, 249). In addition, because cottontail travel along open, well-defined routes (Chapman et al. 1982:116), wearing trails or runways in the vegetation, snow, or underbrush piles (Schwartz and Schwartz 1981:104), they are easy to find. Lastly, cottontail do not run as fast, nor as far, as jackrabbits. All these factors make it easier for individual hunters to procure cottontail by using simple techniques, such as snares, traps, guns, and throwing sticks.

Although not present in large quantities, cottontail remains were recovered during each of the five excavation seasons at Fort Craig. This small game animal also occurs in faunal assemblages from other New Mexico military posts, such as Fort Fillmore (Parmalee 1967:44–45) and Fort Sumner (Olsen and Wilson 1976). Relative to domestic taxa, however, cottontail remains occur in low frequencies at each of these forts. This suggests cottontail flesh was a relatively insignificant supplement to the basic military diet. Perhaps more important, the hunting of this mammal provided a diversion to the monotony of garrison life.

Lepus californicus (Black-tailed Jackrabbit)

Fort Craig is within the range of the black-tailed jackrabbit (*Lepus californicus*), which usually occurs at elevations below 1800 m. It inhabits deserts and open, short-grass prairies with scattered shrubs. In addition, this leporid is very adaptable to agricultural conditions. Areas of heavy brush or woods are avoided (Cockrum

1982:134–135; Dunn et al. 1982:133; Findley et al. 1975:93–94; Hoffmeister 1986:140–141; Zeveloff 1988:98). "They are found in mesquite, sagebrush, desertscrub, into open pinyon-juniper" (Hoffmeister 1986:141).

The jackrabbit usually feeds at night on grasses, mesquite, and herbs. However, cultivated crops are also consumed. As with the cottontail, the jackrabbit obtains protein and certain B vitamins by consuming its soft droppings. This leporid, like the cottontail, depends on succulent or green vegetation for water. Surface water, however, is drunk when available. The size of the jackrabbit home range depends on the availability of food, cover, and water. Daylight hours are usually spent in an unlined hollow scratched into the ground. These nests, known as forms, are found both in the open and in dense vegetation. The breeding season extends from mid- or late winter to late summer. As a result, a single female may have as many as seven litters, of usually two to four individuals, per year. Unlike cottontail babies, the newborns are precocial (relatively independent). The young are born in shallow depressions or excavations that are sometimes fur-lined. They are fully furred, can see, and are able to move about. Because the black-tailed jackrabbit is an r-selected species, the yearly number and size of litters per breeding female help to offset the high mortality rates. The jackrabbit is subject to predation by a wide variety of predators, such as snakes, eagles, hawks, owls, coyotes, foxes, bobcats, skunks, and humans (Clark and Stromberg 1987:84–87; Cockrum 1982:134; Dunn et al. 1982; Hoffmeister 1986:141–142; Schwartz and Schwartz 1981:114–121; Zeveloff 1988:98–100).

Although some people consider jackrabbit flesh to be unpalatable or inferior to that of the cottontail (e.g., Buskirk 1986:134; Castetter and Opler 1936:25; Dunn et al. 1982:137; Opler 1941:325–326; Texas Game, Fish and Oyster Commission 1945:133–134), jackrabbits have been exploited as food resources and as raw material sources by many peoples. When alarmed, the jackrabbit may remain motionless or run away slowly or very rapidly. It can attain speeds of 30 to 35 miles per hour over short distances. Normally a jump covers 1.5 to 3 meters, but the distance increases to 5–6 meters when the animal is speeding. It can also jump as high as 1.7 meters off the ground (Dunn et al. 1982:134; Schwartz and Schwartz 1981:119). Communal hunts and drives are most efficient for procuring jackrabbits.

As with the cottontail, jackrabbit remains were recovered during each of the five excavation seasons at the fort. Again, relative to domestic taxa, the jackrabbit occurs in low frequencies at Fort Craig and other New Mexico forts (e.g., Olsen and Wilson 1976:24; Parmalee 1967).

Family Cervidae (Deer, Wapiti)

Odocoileus spp. (Deer)

Two species of *Odocoileus* occur in the region. The mule deer (*O. hemionus*), a browser, is found at all elevations and in a variety of habitats: brushy and wooded areas, broken country, and open plains. It inhabits the Upper Sonoran, Transition, and Canadian zones (Bailey 1913:32, 43, 47) As a result, a varied diet is consumed. In the northern portion of New Mexico, mule deer live in the yellow pine forest or in the spruce-fir zone from early spring until early winter when they move down into the pinyon-juniper zone. In southwestern New Mexico, they dwell in chaparral and more xeric habitats. In the chaparral, different foods are consumed at different times of the year. In this area, the diet includes buckbrush, sagebrush, spurges, juniper, scrub oak, mountain mahogany, calliandra, mesquite, catclaw, and some grasses. Cultivated crops are also eaten. Formerly, major predators included grizzly bears and wolves. Mountain lions, coyotes, bobcats, and eagles also prey on mule deer (Bailey 1931:29; Findley 1987:140–141; Findley et al. 1975:328–329; Hoffmeister 1986:542–543; Zeveloff 1988:326–327).

The range of the white-tailed deer (*O. virginianus*) includes or formerly included the project area. It occurs in the Upper Sonoran, Transition, and Canadian zones (Bailey 1913:32, 1931:35, 37). In areas where both species live close together, white-tailed deer usually occur at higher elevations and in more rugged terrain, such as steep, rocky, canyon sides (Findley et al. 1975:330). In southwestern New Mexico, they are found in the rough, brushy areas of the mountains. In the summer, white-tailed deer may be found as high as

10,000 ft. The white-tails of southwestern New Mexico are markedly smaller than those of eastern New Mexico (Findley et al. 1975:332). This species is found primarily in woodland communities consisting of evergreen oaks or in mixtures of oak-juniper-pinyon (Hoffmeister 1986:545). However, white-tailed deer also occur in desertscrub. Much of their diet is supplied by juniper, pinyon, hackberry, mesquite, and other bushes and shrubs. In addition, they also eat crops such as corn. Predators of adult white-tailed deer and/or fawns include coyotes, wolves, bobcats, mountain lions, gray foxes, and raptors (Hoffmeister 1986:545, 547–548; Zeveloff 1988:329–330).

Usually, only male deer have antlers. These are shed in early February, at the end of the breeding season. New antlers begin growing by May and remain in velvet until sometime in September, when they stop growing (Hoffmeister 1986:542, 547).

Breeding takes place from late fall to early winter, primarily from December 1 through January 15. Does usually mate for the first time when they are approximately 18 months old. Deer are K-selected mammals. The gestation period is almost seven months. Does give birth to one or two fawns from early July until September (Hoffmeister 1986:542, 547).

Family Antilocapridae (Pronghorn)

Antilocapra americana (Pronghorn)

Although pronghorn (*Antilocapra americana*), a Lower and Upper Sonoran species (Bailey 1913:32, 1931:27), formerly occurred throughout the Southwest, intensive hunting greatly reduced their numbers by the early 1900s. Since that time, however, they have been expanding within their former range. Formerly, pronghorn were almost as numerous as bison (Findley 1987:144; Findley et al. 1975:333–334). They inhabit arid and semi-arid grasslands, subsisting on browse such as sagebrush, buckbrush, and rabbitbrush. Prickly pear cacti, forbs, grasses, and cultivated crops are also consumed. Most, or all, of their water requirement is supplied by the plants they consume. Horns are present in both sexes and the sheaths are shed and replaced annually. Pronghorn congregate in herds of as many as 100 individuals during the winter but disperse into smaller groups in the spring. Breeding occurs in the fall. The pronghorn is a K-selected species. Does give birth usually to twins in late spring. The pronghorn uses its great speed (up to 60 mi per hour) to elude predators such as bobcats, wolves, and coyotes (Bailey 1931:26–27; Findley 1987:144–145; Findley et al. 1975:333–334; Hoffmeister 1986:549–552; Jones et al. 1985:318; Zeveloff 1988:334–336).

Family Suidae (Pigs)

Sus scrofa (Domesticated Pig)

The domesticated pig (*Sus scrofa*) was first introduced into New Mexico by the early Spanish colonists in the sixteenth century (Bennett 1970:231). There is no record, however, that any of these pigs survived. Pigs were brought northward by the colonizers and reached present-day New Mexico with the relief expedition to Oñate in the summer of 1600 (Towne and Wentworth 1950:71). The Spanish pigs were of a Chinese type described as weighing 125 to 150 pounds and having swaybacks, flat feet, and toes spread wide open. In addition, they had short legs. The European type, introduced into the New World by English colonists in Virginia, was leaner and had longer legs. By 1800, admixture of these types produced modern forms that have short-legged heavy bodies; thick and powerful shoulders; and short necks (Bennett 1970:224, 232–233).

Although the pig is omnivorous, it is basically a woods mammal that prefers forests where mast (acorns and nuts) is available. Its nose, the end of which has a tough, cartilaginous disc, is used to root for food. It can also survive in deserts if food and water are available (Bennett 1970:224–225, 228, 230; Skaggs 1986:15). Because adequate food was not generally available or abundant, pigs were scarce in the Spanish Southwest, where they were raised primarily for lard (Crass and Wallsmith 1992:12; Towne and Wentworth 1950:72, 155–156).

The invasion and occupation of New Mexico by Brig. Gen. Stephen Watts Kearny and the Army of the West in 1846 was the beginning of a U.S. military presence in New Mexico. The army's prescribed daily pork ration consisted of 12 ounces of salt pork or bacon (Frazer 1983:3). Because a reliable local pork source did not exist in New Mexico, the army primarily supplied its troops with pork purchased in the East. As a result, the cost of pork was high (Frazer 1983:4, 50–51).

Slaughtering of pigs occurred in the late fall and winter, when the cold made meat preservation possible (McCoy 1874:304; Skaggs 1986:33–34). Once cleaned and gutted, the carcass was hauled to the cooling room, which was often little more than a well-ventilated section of the warehouse into which the freezing-cold winter wind penetrated. It remained there for 24 hours. When it was thoroughly chilled, a cutter severed the head with a cleaver; chopped off the feet, legs, and knee joints; split the carcass; and cut up the balance into hams, shoulders, and "middles." Some trimmed the pieces into proper shape and size for various markets. When lard prices were high, packers trimmed very closely, sometimes rendering whole shoulders into lard. A four-hundred-pound hog usually was reduced to two hundred pounds of pork and forty pounds of lard (Skaggs 1986:39).

Salt pork was produced in Eastern packinghouses by first rubbing dry salt thoroughly into various pork cuts. Then the meat was soaked in a series of pickling vats. Next it was packed into large barrels of varying sizes, called "hogsheads." Layers of pork were alternated with layers of salt (Skaggs 1986:39–40). "Finally, 4 or 5 gallons of pure pickle was poured over the meat, and the barrel was sealed" (Skaggs 1986:40). The hogsheads had 62.5- to 140-gallon capacities. A hogshead of "Prime" pork, an inferior grade produced from leaner animals, usually contained "two shoulders, two jowls, and enough sides to fill out the contents" (Skaggs 1986:40).

The meat could spoil in the barrels if not properly prepared. If packed before the salt had sufficient time to penetrate the meat, it spoiled when the weather turned warm (Skaggs 1986:40). "If the meat had not thoroughly cooled before it was placed in the first pickle vat, the vinegar fermented, which could cause the meat to develop deadly botulism" (Skaggs 1986:40).

Bulk pork consisted of whole hams, shoulders, or sides. This type of meat was reserved for smoking or for the fresh-meat trade. The majority of the bulk pork was sent to smokehouses where it was cured. Afterwards, the meat was packed in hogsheads weighing eight hundred to nine hundred pounds (Skaggs 1986:40–41). Unlike beef, pork was not suitable for drying, because the fat had a tendency to become rancid (Campa 1979:278).

Pork was usually in short supply at New Mexico forts because of high transportation costs and spoilage. The barrels containing salt meat often sprang leaks, which resulted in meat spoilage when the brine drained out. Originally, bacon was packed in round barrels. Because it was cut in squares, the bacon did not completely fill the round barrels. Space was wasted (Frazer 1983:4–5). The army therefore "adopted the practice of putting up bacon in canvas sacks. Both weight and space were saved, but the combination of mid-summer heat and the pressure exerted on the bottom layers of piled bacon led to much loss of the fat part of the bacon" (Frazer 1983:4). For example, a shipment of 300 sacks of bacon from Fort Craig to Fort Sumner in 1867 was declared unfit for consumption (Olsen and Wilson 1976:29). Bacon losses and shortages were unfortunate because the fat was used by the soldiers, when on the march, to make biscuits (Crass and Wallsmith 1992:12; Frazer 1983:4). Eventually, bacon was packed in square boxes, which provided greater protection. Large amounts of bacon, however, were still subject to spoilage (Frazer 1983:4–5). Hams were eventually shipped in boxes. "Chief Quartermaster Herbert M. Enos testified in 1865 that during the previous eight years 75% of hams sent to New Mexico in gunny sacks had been condemned. He claimed that the only good hams received had been sent out in boxes" (D. A. Miller 1989:307). In order to reduce spoilage, it was recommended that bacon and ham be sent to New Mexico with the last supply trains of the season (D. A. Miller 1989:307).

Although the army consumed large quantities of pork, there was little increase in the local production and availability of swine in New Mexico. In addition, supplies of imported pork from local merchants were limited (Frazer 1983:51, 186). A hog-raising experiment at Fort Union was abandoned because of the lack of mast; it was too expensive to feed the pigs corn, which was required for the horses (Crass and Wallsmith 1992:12; Frazer 1983:9). In response to the paucity of locally available swine, other New Mexico forts attempted, at least on a limited scale, to raise pigs. The fact that the maxillae with associated teeth of an immature pig were recovered during the 1993 excavations indicates some pigs were raised at Fort Craig. In addition, there is a reference to the stealing of company hogs by the local civilians (Grinstead 1973:15).

Family Bovidae (Cattle, Sheep, and Relatives)

Bison bison (Bison)

The bison (*Bison bison*), the largest extant terrestrial mammal in North America, was formerly the dominant mammal of the prairies. This grazer of open grasslands once numbered in the millions, but it has been extirpated throughout most of its range. By 1890, fewer than 1,000 bison were left in North America. In 1884, the last recorded killing of free-ranging bison in New Mexico occurred (Findley 1987:146). "Extermination of the bison was part of a United States government policy to suppress the Indian tribes that depended on them for food, clothing, and shelter. At the turn of the century, efforts were finally made to save them from extinction" (Zeveloff 1988:345). Today, almost 100,000 live in public and private herds in western North America, including Ted Turner's ranch within the Pedro Armendaris land grant.

Bos taurus (Domesticated Cattle)

In 1540, domesticated cattle (*Bos taurus*) were first introduced into New Mexico by Coronado's expedition. Although some writers believe Coronado left behind cattle that formed wild herds (e.g., Skaggs 1986:30–31), there is no evidence to substantiate this assertion. It is highly unlikely that any survived in New Mexico. Don Juan de Oñate and his colonists brought the first breeding herd to New Mexico in 1598 (Rouse 1977:54, 79–80; Simmons 1988:5). Unlike in Texas and California, large-scale cattle ranching did not develop in Mew Mexico during the Spanish and Mexican periods. Cattle had secondary or minor importance in an economy that was increasingly dominated by sheep raising. Little beef was consumed. The New Mexicans tended to view cattle primarily as work animals (Frazer 1983:8–9; D. A. Miller 1989:175; Rouse 1977:81; Simmons 1988:5–6). The establishment of U.S. military posts in New Mexico, beginning in 1846, and their concomitant demand for fresh beef provided the impetus for cattle ranching throughout New Mexico and the rest of the Southwest (Frazer 1983:1–2; D. A. Miller 1989:212).

The Spanish cattle of the early New Mexican herds were descendents of cattle originally brought to the New World from Andalusia in Spain and from the Canary Islands. These cattle had large, widespread, upturned horns; a narrow head; and a solid, or nearly solid, hair color (Rouse 1977:viii, 18–19). In Texas, Andalusian cattle that escaped into the wild eventually "mutated into Longhorns—skinny, blue-horned, mealy-nosed, motley brown beasts" (Skaggs 1986:25). The longhorn played an important role in the expanding New Mexico cattle industry of the latter half of the nineteenth century.

By the end of the Civil War, "the government market for beef sparked interest in stocking Southwest ranges and led to rapid development of the cattle industry in both Arizona and New Mexico" (D. A. Miller 1989:175). The Texas longhorns, wild and neglected, were an untapped source of beef. Herds of these cattle had increased greatly during the Civil War. As a result, military personnel, such as General Carleton, encouraged the introduction of Texas cattle into New Mexico. Eventually there was competition among contractors to supply the military with cheap Texas cattle (D. A. Miller 1989:176). "The army's demand for fresh beef encouraged western entrepreneurs to risk the hazards associated with government contracting to supply posts with cheap Mexican and Texas cattle" (D. A. Miller 1989:212). As of 1852, the prescribed

daily beef ration consisted of 1.25 pounds of fresh or salt beef (Frazer 1983:3, 81). Providing military posts with beef, however, was difficult. Originally, because the army's beef demand could not be met locally, cattle were brought from the East over the Santa Fe Trail (Crass and Wallsmith 1992:11; Frazer 1983:50–51, 107; D. A. Miller 1989:175). By the time the Civil War began, most New Mexico garrisons were supplied with local beef. Heavy demands on the local beef herds during the war, however, necessitated the importation of cattle from the East (D. A. Miller 1989:16–17, 175).

Cattle herds at military posts were often sick and undernourished (Crass and Wallsmith 1992:11; Frazer 1983:108, 150, 154). Prior to the Civil War, beef cattle purchased in New Mexico were generally in better condition than the army's own herds (Frazer 1983:108). Contractors' herds after the war, however, were not without complaints. "In later years complaints about contractors' beef ranged from poor and inferior to tough, bony, unwholesome, tainted, sour, destitute of fat, and unfit for issue" (D. A. Miller 1989:188).

Salt beef was purchased from Eastern packinghouses. The packing of beef occurred in the late fall and early winter when grass-fed cattle were fat and the weather was cold enough to cool the meat. After the carcasses were sufficiently cooled, knives and cleavers or steam-powered saws were used to cut them up (McCoy 1874:309, 313). Beef for specific markets was cut in uniform shape and size, and from certain portions of the carcass (McCoy 1874:315). The pieces of meat were placed in barrels to which salt was added. Then the barrels were sealed. The fleshy portion of the hind leg was usually salted and dried as well. Generally, as the availability of fresh beef increased, the consumption of salt beef decreased (McCoy 1874:304, 315, 317). In order to prevent spoilage of dried beef during transport to New Mexico posts, Chief Commissary Officer Charles McClure suggested that it be sent with the last trains of the season (D. A. Miller 1989:307).

Originally, beef cattle were driven to various garrisons where they formed post herds that were slaughtered as needed. These herds were the sources of fresh beef. After delivery the cattle were sometimes given to private individuals under contract with the army, who herded, grazed, and slaughtered the animals for the post (Frazer 1983:51, 150).

Prior to 1867 contractors delivered fresh beef in quarters, and the army bore the expense of employing a butcher at each post to cut the meat into smaller portions. Successful bidders in 1867 agreed to place their own butchers under the orders of the post commissary officers and to cut up and issue the beef in the desired quantities. Contractors were assigned rooms at the posts wherein they would issue meat to troops and keep a meat market for sale of mutton, fresh pork, veal, and sausages to officers, employees, and company messes (D. A. Miller 1989:187–188).

Post herds were eliminated, and cattle on the hoof were only supplied by contractors as needed for troops in the field. Excluding necks and shanks, which were issued to the Indians, fresh beef supplied by contractors was to consist of an equal amount of fore- and hindquarter meat (D. A. Miller 1989:187, 206). To reduce spoilage during the summer, instructions were issued in 1867 "to slaughter cattle late in the afternoon, allowing the meat to hang over night in a cool place, and to issue the meat early the next morning. What remained would be salted and issued a day or two later" (D. A. Miller 1989:187).

Officers only purchased choice cuts from the post meat market. This prompted some contractors to charge officers the civilian price rather than the contract price, which was several cents cheaper (D. A. Miller 1989:191). Consequently, officers tended to receive prime cuts of beef, while the enlisted men were issued the less choice cuts.

Cattle were grazed at Fort Craig (Grinstead 1973:8). When the fort was threatened by Confederate forces in 1862, Col. Edward R. S. Canby ordered the cattle within the confines of the fort. This prevented loss of the herd to the Confederates (Stanley 1963:67). Occasionally, cattle were sent to Fort Craig for distribution to other posts, such as those in the Mesilla Valley and Arizona (Stanley 1963:79). In 1854, Michael Gleason had a contract to deliver cattle from Fort Union to Fort Craig at $3.00 per head (Frazer 1983:107). In 1859, Henry Skillman had a contract to drive 800 head of cattle from Fort Bliss to Fort Craig

at 87.5 cents per head (Frazer 1983:108). Oliver P. Hovey signed a contract in late 1861 to deliver cattle to Fort Craig; however, because of the Confederate invasion of New Mexico, he failed to furnish them. This resulted in a beef shortage at the fort in the spring of 1862 (D. A. Miller 1989:6, 11–12). Consequently, "the army issued orders to seize cattle if residents of nearby villages refused to sell at reasonable prices" (D. A. Miller 1989:11). In July 1862, Probst and Company had a contract to deliver 1,500 head of cattle to the fort at a cost of 7.5 cents per pound. Parker and Company had a contract to deliver 1,000 head at 8.25 cents per pound. For the same period, Hinckley and Blake contracted to supply fresh (i.e., slaughtered) beef at 12 cents per pound (D. A. Miller 1989:17). In the fall of 1862, cattle were obtained from California (Binford 1991:104). Francis H. Creamer had a contract in 1876 to supply Fort Craig with fresh beef at 9 cents per pound (D. A. Miller 1989:195).

Ovis aries (Domesticated Sheep)

Although sheep (*Ovis aries*) were originally introduced into New Mexico by Coronado's expedition in 1540, it is generally agreed that none of the sheep left behind survived (Baxter 1987:2–3). When Oñate and his colonists entered New Mexico in 1598, they brought sheep that formed the basis for the New Mexico sheep industry (Baxter 1983:326, 1987:3; Carlson 1969:26). The sheep the Spaniards brought with them were of a type known as *churro*. They were small in stature and had a meager fleece of coarse, long staple wool. Although meager, the wool was well-suited to hand processing. In addition, the churro's meat was considered excellent. The churro was readily adaptable to the semiarid Southwest. It could withstand drought better than cattle by substituting dew and succulent plants for drinking water (Baxter 1987:20, 91; Carlson 1969:26, 28, 30–31, 1990:79).

Beginning in the seventeenth century, large flocks of sheep developed in New Mexico. Eventually, thousands of sheep were sent down the Camino Real yearly to the mining districts of Mexico, where the flocks provided a cheap source of meat for the miners. When gold was discovered in California, huge flocks were driven there to feed the miners. Sheep were even used as an exchange medium for imported consumer goods (Baxter 1987; Carlson 1969; Simmons 1988:7).

The emphasis of sheep raising gradually changed from meat to wool production. After the Civil War, merino rams were imported into the territory and bred to churro ewes. This increased the wool production of the New Mexican flocks (Baxter 1987:36, 149).

"Most Spanish Americans preferred sheep to cattle because they could be herded and protected easier than the more far-ranging cattle; required less fodder in the winter, . . . ; and provided meat as well as wool for blankets and clothing" (Carlson 1990:82). Among the local populace, mutton was consumed more than beef because cattle were primarily used as work animals (Frazer 1983:8). In addition, the domination of the New Mexican economy by sheep pastoralism was greatly influenced by another important factor, the carrying capacity of the available grazeland. "On the average it took seventy acres for one cow; only fifteen acres were needed per sheep" (Carlson 1969:34).

Although beef was the meat of preference for the army in New Mexico (Crass and Wallsmith 1992:13), local sheep herds were occasionally purchased to fill its needs because the army's demand for beef and pork could rarely be met. In general, mutton tended to be underused by the army (Crass and Wallsmith 1992:13; Frazer 1983; D. A. Miller 1989). In 1879, however, mutton was officially accepted as part of the ration. Eventually, fresh mutton was authorized to be issued in lieu of, and at the same rate as, fresh beef (Binford 1991:104). Sheep were kept at Fort Craig, and controlling them occasionally presented problems (Grinstead 1973:13).

Capra hircus (Domesticated Goat)

Although Spanish explorers introduced goats (*Capra hircus*) into New Mexico as early as 1540, the first permanent goats accompanied Oñate and his colonists to the area in 1598. Goats were raised primarily for

milk and cheese production. Therefore, goats were only kept in small numbers and were never as important economically as sheep (Frazer 1983:9; Rouse 1977:10). Goats were kept at Fort Craig, and as with sheep, controlling them presented problems at times (Grinstead 1973:13).

DESCRIPTION OF THE FORT CRAIG FAUNAL ASSEMBLAGES

The faunal remains recovered from the excavations constitute the third largest assemblage. Martha Binford analyzed the faunal remains recovered from the work conducted at the front gate and guardhouse, while Ken and Marie Brown analyzed those remains recovered from the enlisted men's quarters, the officers' quarters, and the old and new hospitals. This section is divided into two parts. The first part describes the faunal remains recovered from the various areas; the second part provides a summary discussion and comparison of the remains that were recovered.

The Front Gate and Guardhouse

Excavations in these areas recovered 869 pieces of bone. Most (715, 82%) came from the surface collection and subsurface tests in the area of the front gate and appeared to be redeposited material, probably from the post-military occupation. The remaining bone (154, 18%) was recovered from just inside the front gate (SUs 1 and 2). Most of these bones came from outside the buildings, which suggests that they, too, probably indicate the post-military occupation.

The majority of the assemblage is very fragmentary. Only six bones could be identified to the species level, and only an additional four could be identified to the genus level. The species represented by the six bones are *Antilocapra americana* (pronghorn), *Bison bison* (bison), *Capra hircus* (domestic goat), *Sus scrofa* (domestic pig), and *Gallus gallus* (domestic chicken). *Sylvilagus* spp. (cottontail rabbit, represented by two bones), *Lepus* sp. (jackrabbit, one bone), and *Canis* spp. (dog family, one bone) are each represented. Two medium-size-bird bones, one unidentified turtle carapace fragment, one unidentified snake vertebra, and one unidentified fish bone fragment also were recovered.

Bones and bone fragments identified to Bos/Bison and Ovis/Capra reflect the difficulty in distinguishing between these paired species. Twelve bones were identified as cow or bison. Twenty-one were identified as sheep or goat.

The remaining bones were identified less specifically. The vast majority (761, 88%) were identified as mammals of various general size classes. Small, medium-size, and large artiodactyl bones also were identified, along with bones classified to the general order Artiodactyla.

Size class was recorded for all identified bone, and the majority appear to represent relatively large animals. Of the 869 bones recovered the majority (605, 70%) come from mammals ranging in live weight from 15 to 150 kg. These are generally porcupine to deer and bighorn sheep size. Larger animals are represented in the size class that includes mammals with live weights of 26 to 150 kg. These constitute 25% (220 fragments) of the mammal bones and include mammals the size of pronghorn to bison. The remaining bones are classified as indeterminate (7, 1%), prairie-dog size (1 bone) or prairie dog to coyote size (34, 4%).

In terms of anatomical element, indeterminate fragments are by far the most frequent (685, 79%). Indeterminate fragments from an articular end or surface constitute the largest group (201, 23%), followed by unidentified compact tissue (136, 16%), generally indeterminate (121, 14%), long bone fragments (95, 11%), flat bone fragments (84, 10%), and cancellous tissue (47, 5%). Of the bone fragments identified as to element, rib fragments and vertebra fragments are the most numerous, each representing 6% of the assemblage (50 fragments). With the exception of tooth fragments (13, 1%), no other elements constitute more than 1% of the assemblage.

Nearly half the assemblage (423, 49.8%) showed evidence of burning. Most of these were calcine

(140, 16.1%) or graded blue black to calcine (136, 15.7%). Lighter types of burning were more rare.

Evidence of butchering was identified on only 37 bone fragments (4.2% of the assemblage), mostly on bones classified as mammal. Only one bone identifiable to the species level exhibited cut marks. This is the only pig bone identified in the assemblage. Typically, cut marks on this element (astragalus) would suggest dismemberment (Binford 1981:119). Many of the other bone fragments with cuts appeared to be sawn, including three rib fragments and five vertebra fragments.

The Enlisted Men's Quarters

The vertebrate faunal assemblage recovered from the rooms and trash area consists of 261 animal bones (complete elements and bone fragments) and 62 eggshell fragments. Remains were found in all seven study units. The majority of the faunal remains (83%, 232 bones and 36 eggshell fragments) was from Study Units 6 and 9. An additional 13% (20 bones, 22 eggshell fragments) was recovered from Study Unit 7. The number of identified specimens (NISP) for SUs 6, 7 and 9 is presented in Table 24.2.

Table 24.2. Vertebrate Faunal Remains Recovered from the Mess or Storeroom (SU 6), Possible Kitchen (SU 7), and Trash Area (SU 9)

Taxon	Mess or Storeroom (SU 6)	Kitchen (SU 7)	Trash (SU 9)
Gallus gallus *(domesticated chicken)*	*2*	*1*	—
Subfamily Anatinae (ducks)	1	—	1
Unidentified bird	37	27	—
Sylvilagus sp. (cottontail)	6	—	—
Antilocapra americana (pronghorn)	1	1	—
Order Artiodactyla	—	—	9
Sus scrofa (pig)	1	—	—
Bos taurus (cattle)	10	—	8
Ovis/Capra (domesticated sheep/goat)	3	1	1
Unidentified fish	—	1	—
Unidentified taxon	79	10	107
Total	139	42	129

Room 1, Squad Room (SU 5)

Faunal remains recovered from this study unit consist of four eggshell fragments.

Room 5, Possible Messroom (SU 6)

A total of 139 faunal remains (103 bones, 36 eggshell fragments) came from this study unit (Table 24.2). The majority of the bones (58%) are from cattle or cattle-size animals. An additional 29% are of sheep/goat or at least of sheep-/goat-size animals. Evidence of butchering is exhibited on 42 bones; 24 of these are ribs. Butchering consists of handsaw marks in all cases except one, a sheep/goat calcaneum with oblique chop marks. All but three cuts are transverse or oblique to the long axis of the bone. The three anomalous cuts are along the longitudinal axis of two vertebrae and one sternebra. Other domesticated fauna recovered from this room include one pig and two chicken bones. The eggshell fragments are probably from a chicken. Wild fauna are represented by six cottontail and one pronghorn specimen, suggesting that regular rations were at least occasionally supplemented with game from the surrounding area. However, the paucity of these remains does not indicate if hunting was common.

Room 6, Kitchen (SU 7)

Forty-two faunal remains (20 bones, 22 eggshell fragments) were recovered from Room 6 (Table 24.2).

Birds account for 66% (7 bones, 22 eggshell fragments) of the faunal assemblage from this study unit. Although only two bird bones were identified to subfamily or species level, the sizes of the other avian bones suggest the presence of a variety of birds. The eggshell fragments are probably those of chicken. An additional 16% is represented by sheep/goat. Oblique saw marks are exhibited on the distal end of a sheep-/goat-size rib shaft fragment. The exploitation of riverine resources is indicated by the presence of a fish vertebra and a waterfowl femur. The pronghorn specimen is also indicative of hunting.

Trash Concentration (SU 9)

The second largest faunal sample (n = 129) came from the trash scatter (Table 24.2). Cattle and cattle-size remains account for 30% of this sample. Smaller artiodactyls, such as deer and sheep/goat, represent 68% of the faunal remains. The exploitation of riverine resources is indicated by the presence of a waterfowl tibiotarsus. Butchering is exhibited by 39 bones, 38 of which have been sawed. A single indeterminate bone fragment of a deer-size or sheep-/goat-size animal has been chopped. In addition, the avian specimen exhibits an oblique saw mark on its shaft. The only burning observed within the entire faunal assemblage is from this trash area; twenty bones exhibit some degree of calcination.

Bakery Main Room (SU 8)

Only two bone fragments were recovered from the oven room. One is the proximal end, including the proximal shaft, of a cow humerus. Oblique saw marks are present on the distal end of the shaft. The second specimen is a thoracic vertebra fragment of a deer- or sheep/goat-size animal. Sawing is exhibited along the longitudinal axis of the vertebra.

Northwest Room of Bakery (SU 10)

The faunal sample from SU 10 consists of only two bones. The distal end of a cow humerus, with more than half of the shaft, exhibits oblique saw marks on the proximal end of the shaft. In addition, transverse saw marks are present on one end of a cow-size rib shaft fragment.

Oven Foundation (SU 11)

Five bones were recovered from the fill within the oven foundation. Two are cow-size and the remaining three are at least deer-size. Butchering is evident on three specimens. Oblique saw marks are visible on the shaft fragment of a cow-size long bone. The longitudinal axis of a deer-size vertebra fragment and an indeterminate fragment of a deer-size animal also exhibit sawing.

The Officers' Quarters

The vertebrate faunal assemblage recovered from the eastern set of officers' quarters consists of 471 bone specimens (complete elements and bone fragments) and 9 eggshell fragments (1.88 g). These remains were found within Rooms 1-5 (SUs 13-17), primarily from the lower stratum. The number of specimens (N) and minimum number of individuals (MNI) for the entire assemblage are presented in Table 24.3.

Room 1 (SU 13)

Only eight faunal remains were recovered from Study Unit 13. The only specifically identified specimen is a deer innominate fragment. The deer-size specimens consist of a proximal shaft of a rib and an indeterminate fragment that exhibits dismembering saw marks. The cattle-size fragment is of an indeterminate element. Butcher marks are present on three of the indeterminate size mammalian remains. Dismembering saw marks occur on a vertebra fragment and on an indeterminate fragment. A long bone shaft fragment exhibits cut marks. The remaining specimen is an indeterminate fragment. The paucity of faunal remains from this study unit precludes any meaningful interpretations.

Table 24.3. Vertebrate Faunal Remains Recovered from the Officers' Quarters

Taxon	NISP	MNI
Catostomidae (suckers)	2	1
Indeterminate medium-size fish	3	—
Indeterminate large fish	2	—
Indeterminate size fish	1	—
Anseiformes (swans, geese, ducks)	1	1
Anatinae (ducks)	19	4
Anas sp. (duck)	3	1
Gallus gallus (chicken)	68	9
Meleagris gallopavo (turkey)	1	1
Callipepla sp. (quail)	13	2
Grus sp. (crane)	1	1
Passeriformes (perching birds)	1	1
Colaptes auratus (northern flicker)	1	1
Indeterminate small bird (quail-size)	17	—
Indeterminate medium bird (duck size)	8	—
Indeterminate size bird	9	—
Sylvilagus sp. (cottontail)	32	4
Lepus californicus (black-tailed jackrabbit)	3	2
Sus scrofa (pig)	6	2
Odocoileus sp. (deer)	5	1
Odocoileus/Antilocapra americana (deer/pronghorn)	1	1
Bos taurus (cattle)	40	1
Indeterminate small mammal (rabbit-size)	2	—
Indeterminate medium mammal (coyote-size)	3	—
Indet. large mammal (deer-size)	118	1
Indet. very large mammal (cattle-size)	39	—
Indeterminate size mammal	80	—
Unidentified	1	—
Total	480	33

Room 2 (SU 14)

Only three bone specimens were recovered from Study Unit 14. A deer-size cervical vertebra fragment exhibits dismembering saw marks. Chop marks are present on the proximal shaft of a deer-size rib. An indeterminate fragment of a cattle-size mammal has dismembering saw marks. The paucity of faunal remains from this SU precludes any meaningful interpretations.

Room 3 (SU 15)

The vast majority of the faunal remains (65.42%) recovered from the officers' quarters are from Study Unit 15. The vertebrate assemblage consists of 307 bone specimens and 7 pieces of eggshell (Table 24.4). The most frequently occurring, specifically identified taxa are ducks (5.42%), chicken (16.24%), quail (3.18%), and cottontail (9.55%). Additional notable taxa include suckers, other medium-size and large fish, crane, a perching bird, black-tailed jackrabbit, pig, deer, and cattle. With the exception of the kitchen (SU 17), the quantity of the remains and the variety of taxa represented in Study Unit 15 contrasts sharply with the paucity of faunal remains recovered from the other study units.

Fish are represented by a cleithrum, a dorsal spine, a spine fragment, and four vertebrae. The ducks are represented by three coracoid, two scapula, two humerus, two radius, two carpometacarpus, two furculum, two femur, and three tibiotarsus specimens. A coracoid, a furculum and a tibiotarsus exhibit cut marks. Chicken specimens are a coracoid, two scapulae, nine humeri, three radii, seven ulnae, three carpometacarpi,

Table 24.4. Vertebrate Faunal Remains Recovered from Rooms 3, 4, and 5 in the Officers' Quarters

Taxon	Room 3 (SU 15)		Room 4 (SU 16)		Room 5 (SU 17)*	
	N	MNI	N	MNI	N	MNI
Catostomidae (suckers)	1	1	1	1	—	—
Indeterminate medium-size fish	3	—	—	—	—	—
Indeterminate large fish	2	—	—	—	—	—
Indeterminate size fish	1	—	—	—	—	—
Anseiformes (swans, geese, ducks)	1	1	—	—	—	—
Anatinae (ducks)	15	3	—	—	4	2
Anas sp. (duck)	2	1	—	—	1	1
Gallus gallus (chicken)	51	7	6	2	11	2
Meleagris gallopavo (turkey)	—	—	—	—	1	1
Callipepla sp. (quail)	10	2	—	—	3	1
Grus sp. (crane)	1	1	—	—	—	—
Passeriformes (perching birds)	1	1	—	—	—	—
Colaptes auratus (northern flicker)	—	—	—	—	1	1
Indeterminate small bird (quail-size)	10	—	—	—	7	—
Indeterminate medium bird (duck-size)	7	—	—	—	1	—
Indeterminate size bird	7	—	—	—	2	—
Sylvilagus sp. (cottontail)	30	4	1	1	1	1
Lepus californicus (jackrabbit)	2	1	—	—	1	1
Sus scrofa (pig)	2	1	1	1	3	1
Odocoileus sp. (deer)	3	1	—	—	1	1
Odocoileus/Antilocapra americana (deer/pronghorn)	1	1	—	—	—	—
Bos taurus (cattle)	3	1	—	—	37	1
Indet. small mammal (rabbit-size)	2	—	—	—	—	—
Indet. medium mammal (coyote-size)	2	—	—	—	1	—
Indet. large mammal (deer-size)	94	—	7	—	13	—
Indet. very large mammal (cattle-size)	9	—	1	—	27	—
Indeterminate size mammal	53	—	19	—	4	—
Unidentified	1	—	—	—	—	—
Total	314	26	36	5	119	13

*kitchen

four furcula, two innominates, five femora, thirteen tibiotarsi, a fibula, and a tarsometatarsus. Cut marks are present on a furculum, a femur, two tibiotarsi, and a fibula. Quail are represented by a coracoid, three humeri, a radius, two carpometacarpi, two tibiotarsi, and a tarsometatarsus. None of these specimens exhibits butcher marks. Chop marks are present on the shaft of a right radius of a crane. The humerus of a perching bird was also recovered. Specimens from unidentified birds are five cervical vertebrae, a sternum fragment, two ribs, a radius, an ulna, a tibiotarsus, a phalange, five long bone shaft fragments, and seven occurrences of eggshell. Butcher marks are not present on any of these remains.

Cottontail specimens consist of an occipital, a thoracic vertebra, two lumbar vertebrae, two scapulae, six humeri, a radius, an ulna, two innominates, three femora, four tibiae, a calcaneum, four metatarsi that articulate, and two phalanges. The lumbar vertebrae and an innominate exhibit cut marks. Chop marks are present on one tibia. A jackrabbit humerus shaft and an innominate fragment were recovered. Pig is represented by two fibula shaft fragments. Deer specimens are two ulna fragments that articulate, and a cuneiform. The deer/pronghorn element is the distal shaft of a tibia. Butcher marks are not present on any of the jackrabbit, pig, deer, or deer/pronghorn remains. Cattle are represented by a lumbar vertebra fragment, a rib shaft fragment, and an innominate fragment. Each of these specimens exhibits saw marks.

The rabbit-size and coyote-size remains each consist of two long bone shaft fragments. None of these specimens has butcher marks. The deer-size specimens consist of nine indeterminate vertebra fragments, seven thoracic vertebra fragments, 12 lumbar vertebra fragments, a sacrum fragment, 51 rib fragments, nine long bone shaft fragments, and five indeterminate fragments. Butcher marks are present on 37 specimens: 13 with cut marks, five with chop marks, 16 with saw marks, and three marks made by an indeterminate tool. Cattle-size remains consist of two lumbar vertebra fragments, an indeterminate vertebra fragment, the proximal shaft of a rib, a long bone shaft fragment, and four indeterminate fragments. With the exception of one indeterminate fragment, saw marks were noted on each of the cattle-size specimens. Indeterminate size mammalian remains consist of four vertebra fragments, three rib shaft fragments, a long bone shaft fragment, and 45 indeterminate fragments. Butcher marks are present on 24 specimens, one with cut marks and 23 with saw marks. The single unidentified specimen is a long bone shaft fragment without butcher marks.

The taxonomic composition of the vertebrate assemblage from Study Unit 15 indicates that the officers had access to a variety of faunal resources. These included not only domestic species (chickens, cattle, pigs) but also locally available game animals exploited from the adjacent grassland (quail, cottontail, jackrabbit) and riverine (fish, waterfowl, deer) environments. The cattle, cattle-size, and deer-size specimens (ribs, thoracic vertebrae, lumbar vertebrae) suggest the officers had access to choice cuts of meat. These observations will be examined in more detail below.

Room 4 (SU 16)

Thirty-six faunal specimens (Table 24.4) were recovered from Study Unit 16. Although the assemblage is small, a variety of faunal resources representative of several environments is indicated.

Riverine fauna are represented by a sucker cleithrum. The most frequently occurring taxon identified as to genus is chicken (16.67%). Chicken remains consist of a coracoid, a scapula, two humeri, a radius, and a carpometacarpus. Butcher marks are not present on any of these specimens. A distal shaft of a cottontail femur was recovered. It does not exhibit butcher marks. A shaft fragment of a pig fibula exhibiting saw marks was recovered. Deer-size remains consist of two vertebra fragments, four ribs, and a scapula fragment. Saw marks are present on a lumbar vertebra, the proximal shaft of a rib, and on the scapula fragment. A cattle-size vertebra fragment with saw marks was recovered from this study unit. Indeterminate-size mammalian remains consist of 19 indeterminate fragments, two of which exhibit saw marks.

Room 5 (SU 17)

The faunal assemblage from Study Unit 17 consists of 117 bone specimens and 2 pieces of eggshell (Table 24.4). This study unit yielded the second largest quantity of faunal remains (24.79%) recovered from the officers' quarters. The most frequently occurring, specifically identified taxa are duck (3.36%), chicken (9.24%), quail (2.52%), pig (2.52%), and cattle (31.09%). Other noteworthy taxa include turkey, northern flicker, cottontail, black-tailed jackrabbit, and deer. The variety of taxa recovered from Study Unit 17 is comparable to that from Study Unit 15.

The duck remains consist of an ulna, a radius, a tibiotarsus, and two tarsometatarsi, none of which exhibit butcher marks. Chicken is represented by two coracoids, three humeri, a radius, two carpometacarpi, a furculum, and two tibiotarsi. Butcher marks are not present on the chicken remains. A turkey femur exhibits dismembering and filleting cut marks. Quail remains consist of a coracoid, a humerus, and an ulna. A northern flicker ulna was also recovered. Specimens from unidentified birds include a vertebra fragment, a humerus, an ulna, a tibiotarsus, four long bone shaft fragments, and two pieces of eggshell. Butcher marks are not present on the remains of these birds, the quail, or the flicker.

Cut marks are present on a cottontail innominate. A jackrabbit innominate exhibits both chop and cut marks. Pig remains consist of two fibula shaft fragments, one of which exhibits saw marks, and a metacarpal

fragment. A deer calcaneum fragment was also recovered. The cattle remains consist of 10 thoracic and 15 lumbar vertebra fragments, a sacrum fragment, eight rib fragments, a scapula fragment, an innominate fragment, and the distal shaft of a tibia. Except for two thoracic vertebra fragments, all of the cattle remains exhibit saw marks. A coyote-size long bone shaft fragment was recovered. Deer-size specimens consist of four vertebra fragments, seven rib fragments, and two long bone shaft fragments. A thoracic vertebra fragment and a rib fragment have saw marks. Cut marks are present on two ribs. Cattle-size remains are represented by 14 vertebra fragments, four rib shaft fragments, one long bone shaft fragment, and eight indeterminate fragments. Saw marks are present on 11 vertebrae, two ribs, and three indeterminate fragments. One rib has chop marks and the long bone shaft fragment has cut marks. The indeterminate size mammalian remains are a vertebrate fragment with saw marks, a long bone shaft fragment, and two indeterminate fragments, one with saw marks and one with cut marks.

The New Hospital

The new hospital excavations yielded 609 vertebrate faunal remains. These remains came from five study units, primarily from the lower stratum. The NISP and MNI values for the assemblage are listed in Table 24.5. The following are descriptions of the vertebrate faunal remains associated with each of the study units.

Table 24.5. Vertebrate Faunal Remains Recovered from the New Hospital

Taxon	NISP	MNI
Cyprinidae (carps and minnows)	1	1
Trionyx spiniferus (spiny softshell turtle)	1	1
Buteo sp. (buzzard hawk)	1	1
Gallus gallus (domestic chicken)	8	2
Duck-size bird	1	—
Sylvilagus sp. (cottontail)	3	3
Artiodactyla (even-toed ungulates)	2	—
Lepus californicus (black-tailed jackrabbit)	2	2
Sus scrofa (domesticated pig)	16	2
Bos taurus (domesticated cattle)	74	11
Ovis aries (domesticated sheep)	45	6
Capra hircus (domesticated goat)	1	1
Ovis/Capra (sheep/goat)	22	—
Indeterminate rabbit-size mammal	1	—
Indeterminate dog-size mammal	4	—
Indeterminate deer/sheep-size mammal	140	—
Indeterminate cow-size mammal	195	—
Indeterminate size mammal	92	—
Total	609	30

The Black Ward (SU 21)

The faunal assemblage from the black ward ($n = 28$, 4.6%) consists of cottontail, cattle, sheep-size, and cattle-size remains (Table 24.6). Sheep-size remains consist of humerus fragments, a tibia fragment, thoracic and lumbar vertebrae, and a rib fragment. The cattle and cattle-size remains consist of sternum fragments, a cuneiform, thoracic vertebrae, and a rib fragment. Two unidentified calcined bone specimens are indicative of intense burning. Six unidentified specimens exhibit butcher marks; two are chopped and four are sawed.

The Hallway (SU 22)

The hallway assemblage ($n = 107$, 17.6%) contains remains of fish (Cyprinidae), jackrabbit, pig, cattle, and sheep (Table 24.6). The pig remains consist of left and right anterior maxillae with associated first, second, and third deciduous incisors, deciduous canines, and tooth buds of the first premolars. Based on criteria presented by Amorosi (1989:93–94), this individual was four to six months of age at the time of death. Its occurrence suggests pigs (or at least a pig) were either raised on the fort premises or procured locally by fort personnel. The sheep and sheep-size elements consist of nasals, tibia fragments, a calcaneum, a trapezoid-magnum, thoracic and lumbar vertebra fragments, rib fragments, a proximal epiphysis fragment of a humerus, and a proximal end and shaft of a femur. The cattle and cattle-size elements consist of portions of the proximal epiphyses of humeri and femora; cervical, thoracic, and lumbar vertebra fragments; rib fragments; a sternum fragment; and a distal epiphysis fragment of a femur.

Table 24.6. Vertebrate Fauna Remains Recovered from the Wards, Hallway, and Below the Floor in the New Hospital

	Black Ward (SU 21)		Hallway (SU 22)		White Ward (SU 23)		Lower Trash (SU 25)	
Taxon	N	MNI	N	MNI	N	MNI	N	MNI
Cyprinidae (carps and minnows)	—	—	1	1	—	—		
Trionyx spiniferus (spiny softshell turtle)	—	—	—	—	—	—	1	1
Buteo sp. (buzzard hawk)	—	—	—	—	1	1		
Gallus gallus (domestic chicken)	—	—	—	—	—	—	8	2
Duck-size bird	—	—	—	—	—	—	1	—
Sylvilagus sp. (cottontail)	2	2	—	—	1	1		
Artiodactyla (even-toed ungulates)	—	—	—	—	—	—	2	—
Lepus californicus (jackrabbit)	—	—	1	1	1	1		
Sus scrofa (domesticated pig)	—	—	13	1	—	—	3	—
Bos taurus (domesticated cattle)	3	1	17	4	8	2	46	4
Ovis aries (domesticated sheep)	—	—	5	1	10	2	18	2
Capra hircus (domesticated goat)	—	—	1	—	—	—	1	1
Ovis/Capra (sheep/goat)	—	—	—	—	7	—	13	—
Indeterminate rabbit-size mammal	—	—	—	—	1	—		
Indeterminate dog-size mammal	—	—	17	—	1	—	2	—
Indeterminate deer/sheep-size mammal	11	—	—	—	27	—	84	—
Indeterminate cow-size mammal	9	—	35	—	33	—	117	—
Indeterminate size mammal	3	—	16	—	9	—	64	—
Total	28	3	107	8	99	7	360	11

One proximal epiphysis of a cow humerus exhibits carnivore gnawing. Butcher marks occur on 53 specimens, of which 17 are cattle and one is sheep. All but one are sawed; the sole exception is chopped.

The presence of the portions of femoral and humeral epiphyses ($n = 15$) is curious. Most occurred in several small clusters under the wooden floor of the hall. Originally it was thought that they may have been gaming pieces because these specimens are plano-convex in cross-section and circular to oval in plan view. However, microscopic examination of the surfaces and edges did not discern any polish, wear, or rounding. Although the flat surfaces appeared smooth to the naked eye, striations from sawing were visible under magnification. It is now believed that these specimens represent butchering and food preparation. The upper forelimbs and hindlimbs tended to be dismembered (i.e., sawed) close to the articulation of the humerus with the scapula and of the femur with the innominate. As a result, a small portion of the humeral and femoral heads was retained in their respective sockets (glenoid and acetabular). These resulting portions, which do not have a very high meat content, were probably used to make soup, just as they are nowadays. During the course of cooking, the epiphysial portions became dislodged from their sockets. Whereas the sockets were probably highly visible in the soup, owing to their larger size and irregular shape, the epiphysial portions were not. As a result, they could easily have been incorporated into a bowl of soup served to a sick soldier. These specimens were subsequently discarded into the hall of the unfinished hospital before the wooden floor was installed.

The White Ward (SU 23)

The assemblage recovered from the white ward ($n = 99$, 16.3%) is composed of hawk, cottontail, jackrabbit, cattle, and sheep remains (Table 24.6). The hawk is represented by a nearly complete carpometacarpus (wing tip). The sheep and sheep-size remains consist of a scapula fragment; humerus fragments; radius fragments; a lunate; cervical, thoracic, and lumbar vertebra fragments; rib fragments; an innominate fragment; femur fragments; a patella; tibia fragment; calcanea; a naviculo-cuboid; and first phalanges. The cattle and

cattle-size remains consist of a sternum fragment, humerus fragments, innominate fragments, a tibia fragment, a calcaneum fragment, cervical vertebra fragments, a caudal vertebra, and rib fragments.

An unidentified calcined long bone fragment is indicative of intense burning. Butcher marks are discernible on 25 bone specimens from the white ward. Of these, five are cattle and two are sheep. Eleven specimens have been chopped and 14 have been sawed. This sample includes a slice of a humeral head. It is similar to the humeral and femoral specimens that were recovered beneath the floor in the hall (SU 22). This specimen, therefore, is also considered indicative of soup.

One modified bone was recovered from the white ward. It consists of an indeterminate element of an indeterminate size mammal and appears to be a knife handle fragment (see Modified Bone below).

The Trash Area below the Floor (SU 25)

Most of the assemblage from the trash area (n = 360, 59.1%) is composed of softshell turtle, chicken, pig, cattle, sheep, and goat remains (Table 24.6). The softshell turtle is represented by a complete right xiphiplastron. As mentioned previously, softshell turtle meat is excellent. This turtle was probably procured as a supplement to the regular army diet. The chicken elements are a sternum, a humerus, radii, an ulna, an innominate and femora. These represent breast, wing, and leg portions (Figure 24.1a). Pig elements consist of the proximal end and shaft of a second metacarpal, an innominate fragment, and a tibia shaft (Figure 24.1b). These elements represent pigs feet, rump, and hindshank.

The sheep and sheep-size elements consist of a maxilla with teeth; an occipital condyle; a mastoid process; a basioccipital; atlas, cervical, thoracic, lumbar, and caudal vertebrae; sacral and rib fragments; a scapula; humerus and radius fragments; a scaphoid; innominate, femur, and tibia fragments; a calcaneum; astragali; first and third phalanges; and a second phalange (Figure 24.1c). The only identified goat element is a complete calcaneum. The cattle and cattle-size

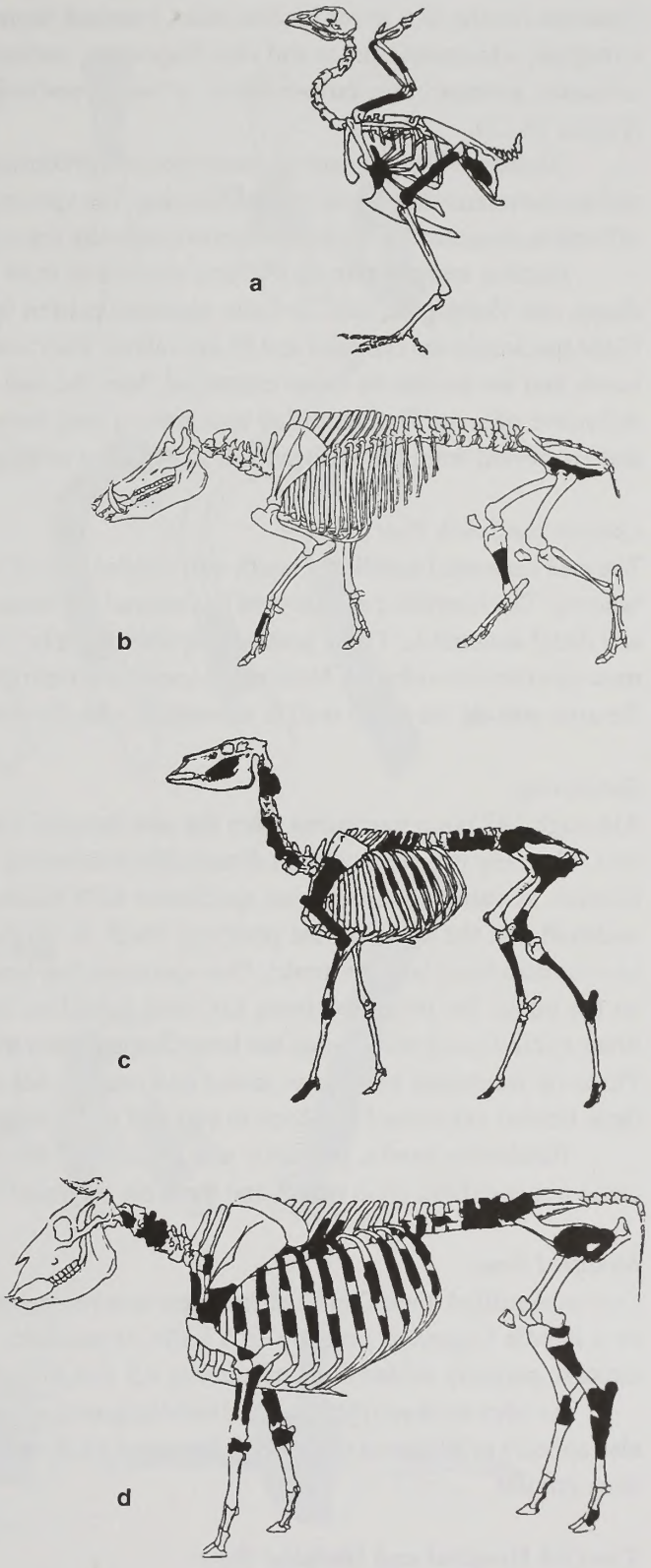


Figure 24.1. *Chicken, pig, sheep-, and cattle-size elements recovered from trash beneath new hospital (SU 25).*

elements consist of a lower incisor; atlas, cervical, thoracic, and lumbar vertebra fragments; rib fragments; a scapula; a humerus; radius and ulna fragments; various carpals; innominate and tibia fragments; a femur; calcanea; astragali; naviculo-cuboids; a lateral malleolus; a second phalange; and a proximal sesamoid (Figure 24.1d).

Nineteen indeterminate mammal specimens, consisting of a cervical vertebra, a rib, long bone fragments, and indeterminate fragments, exhibit burning. Ten specimens are calcined and nine are charred. The frequency of burning suggests this trash area was occasionally burned and/or was a locus for disposal of fireplace debris.

Butcher marks occur on 96 bone specimens from the trash area (Figure 24.2). Of these, one pig, two sheep, one sheep/goat, and 13 cattle elements exhibit butcher marks produced by saws and hatchets/axes. Eight specimens are chopped and 88 are sawed. Two butchered cattle specimens are sawed slices of femoral heads that are similar to those recovered from the hall (SU 22). As with the others, these are considered indicative of soup. One modified specimen, a long bone shaft fragment of an indeterminate size mammal, was recovered from the trash area. It too appears to be part of a knife handle (see Modified Bone, below).

Outside the South Wall (SU 26)

The area excavated outside the south wall yielded a small assemblage ($N = 15$, 2.5%). The only identified taxon is sheep. The identified elements of this animal are metacarpal fragments; first, second, and third phalanges; and distal sesamoids. These portions represent butchering waste (metacarpal and phalanges) and low-value meat cuts (tibia/hindshank). None of the specimens from this area exhibits butcher marks. These remains suggest the area outside the south wall is associated with the trash midden upon which the new hospital was built.

Butchering

Although 187 bone specimens from the new hospital exhibit butchering, few were identified as to specific taxa. The only pig element with discernible butchering is an innominate fragment with chop marks on the ischium. A variety of sheep/goat specimens have butcher marks. Two humeri exhibit chopping, one at the midshaft and the other on the proximal shaft. A single radius exhibits a chop mark near midshaft. Two innominates have butcher marks. One specimen has been chopped above the acetabulum on the illium and on the pubis, the other specimen has been sawed on the illium immediately above the acetabulum. Two tibiae exhibit butchering—one has been chopped near midshaft and the other has been sawed near midshaft. Three rib fragments have been sawed and one has been chopped. Finally, two cervical, four thoracic, and three lumbar vertebrae have been sawed and two lumbar vertebrae have been chopped.

Butchering marks, primarily saw marks, are discernible on a large number of cattle elements. A few cattle bones exhibit chop marks and three rib fragments have both saw and chop marks (Table 24.7).

Modified Bone

One unidentified, modified bone fragment was recovered from the white ward (SU 23). This specimen may be a handle fragment, possibly of a knife. It measures 31 mm long, 12 mm wide, and 3.7 mm thick. A circular, partially drilled hole, measuring 9.5 mm in diameter, occurs on the exterior bone surface.

Another unidentified, modified bone fragment was recovered from the trash area (SU 25). This specimen also appears to be part of a handle. It measures 64.3 mm long, 10.2 mm wide, and 6.4 mm thick. One end has been ground.

The Old Hospital and Hospital Row

The excavations within the area of the old hospital yielded 147 vertebrate faunal remains. The NISP and MNI for the entire assemblage is presented in Table 24.8. The faunal remains came from eight study units, primarily from the lower stratum. In addition to the 147 vertebrate faunal remains, a single human bone and

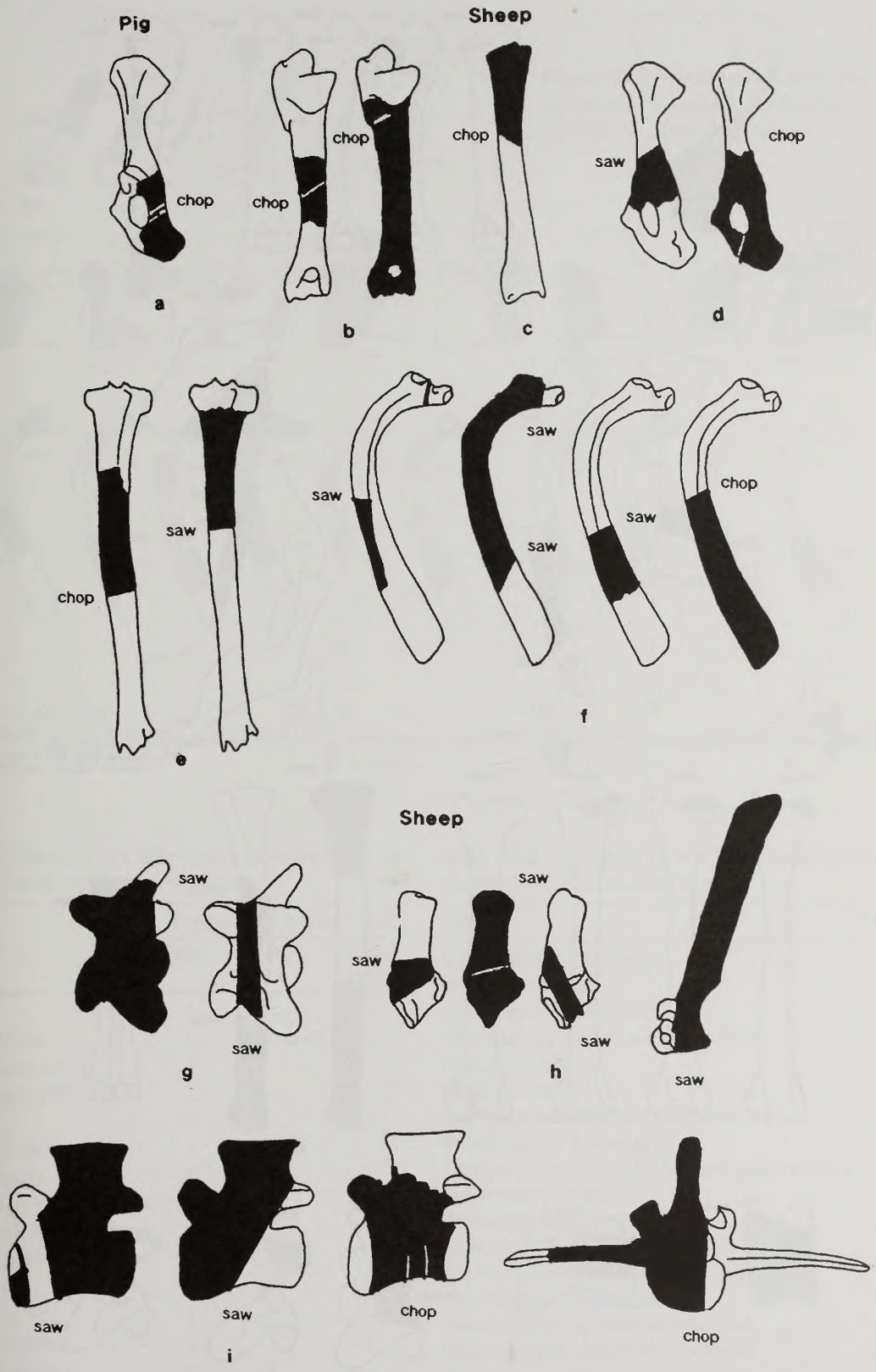


Figure 24.2. *Butcher marks on bones from the trash beneath the new hospital: (a) pig innominate. Sheep-size bones: (b) humeri, (c) radius, (d) innominates, (e) tibias, (f) ribs, (g) cervical vertebrae (h) thoracic vertebrae, (i) lumbar vertebrae.*

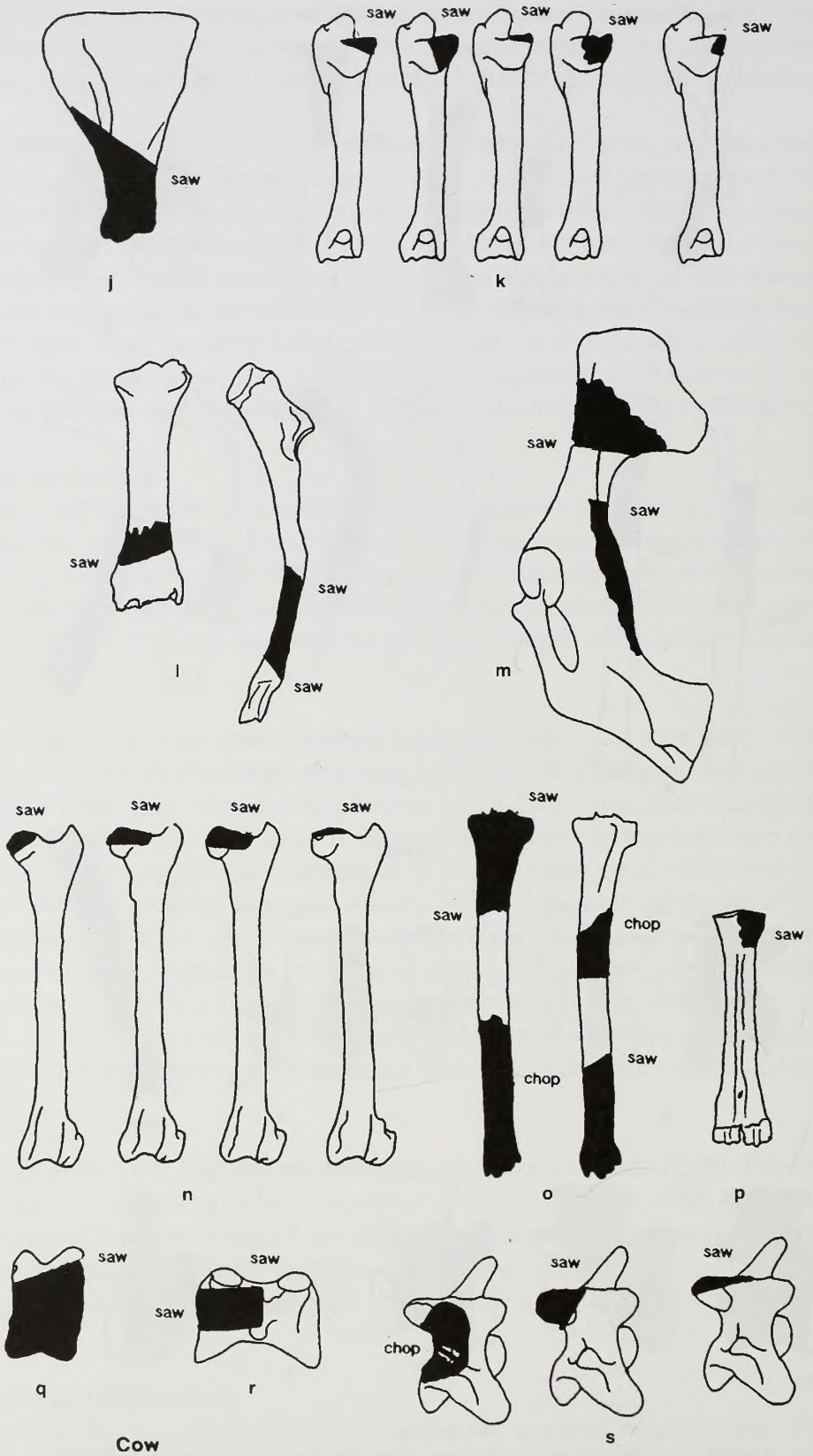


Figure 24.2. *(Continued) Cattle-size bones: (j) scapula, (k) humeri, (l) radius and ulna, (m) innominates, (n) femurs, (o) tibias, (p) metatarsal, (q) astragalus, (r) atlas vertebra, (s) cervical vertebrae.*

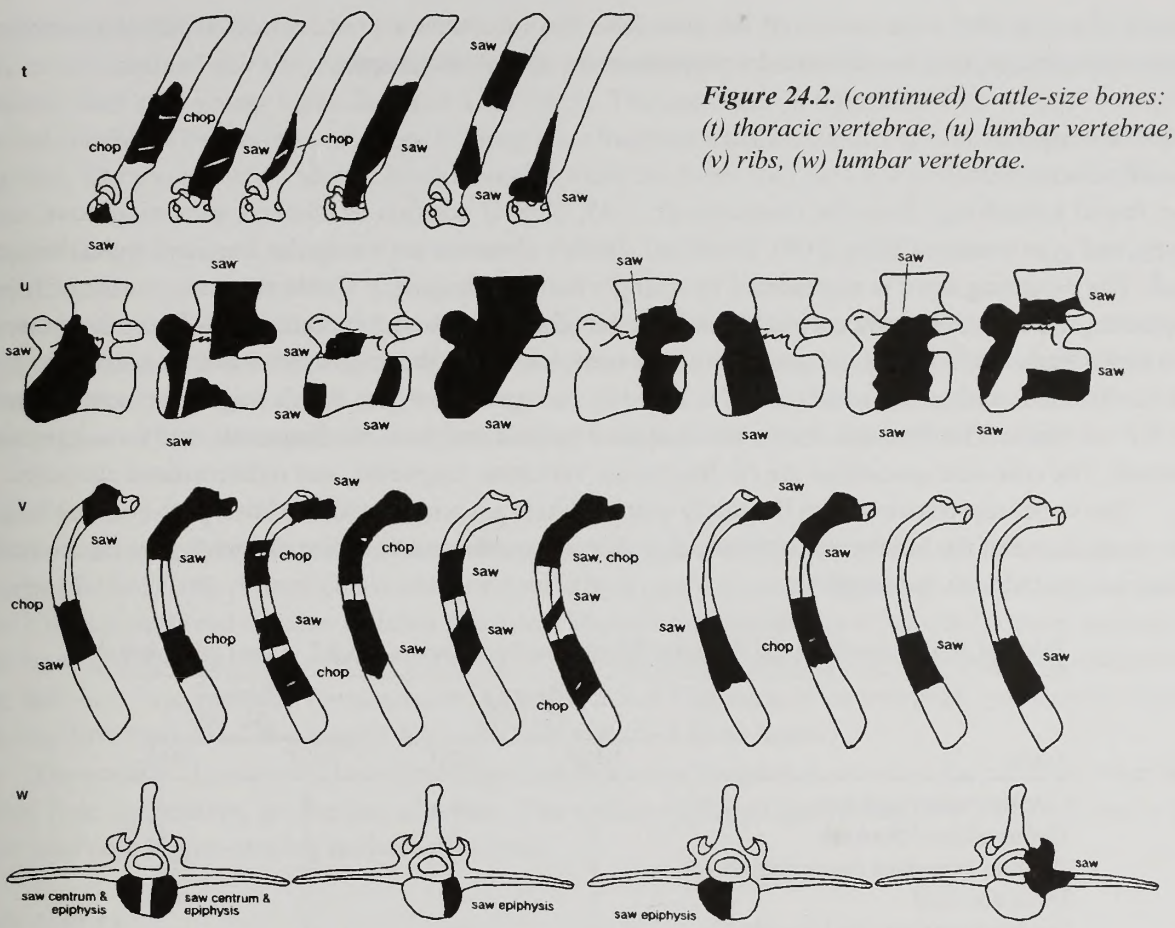


Figure 24.2. *(continued) Cattle-size bones: (t) thoracic vertebrae, (u) lumbar vertebrae, (v) ribs, (w) lumbar vertebrae.*

Table 24.7. Number of Cattle Bones from the New Hospital Exhibiting Butchering Marks

Element	Type of Butchering Mark		
	Saw	Chop	Saw and Chop
Scapula	1	—	—
Humeral heads	6	—	—
Radius (distal shaft)	1	—	—
Ulna (distal shaft)	1	—	—
Illium	1	—	—
Illium/ischium	1	—	—
Femoral heads	8	—	—
Tibia (distal shaft)	1	1	—
Tibia (proximal shaft)	1	1	—
Metetarsal (proximal end)	1	—	—
Astragulus	1	—	—
Atlas	1	—	—
Cervical vertebra	2	1	—
Thoracic vertebra	4	4	—
Lumbar vertebra	21	—	—
Ribs	13	5	3
Total	64	12	3

Table 24.8. Vertebrate Faunal Remains Recovered from the Old Hospital/Hospital Row

Taxon	NISP	MNI
Catostomidae (suckers)	1	1
Medium-size fish	4	—
Gallus gallus (chicken)	11	2
Zenaida macroura (mourning dove)	1	1
Duck-size bird	1	—
Turkey-size bird	1	—
Indeterminate size bird (eggshell)	3	—
Sylvilagus sp. (cottontail)	3	1
Lepus californicus (black-tailed jackrabbit)	3	1
Bos taurus (cattle)	32	1
Bison/Bos (bison or cattle)	3	—
Ovis aries (domesticated sheep)	2	1
Capra hircus (domesticated goat)	1	1
Ovis/Capra (sheep/goat)	9	—
Indeterminate rabbit-size mammal	6	—
Indeterminate coyote-size mammal	10	—
Indeterminate sheep-size ungulate	1	—
Indeterminate deer-size mammal	28	—
Indeterminate cow-size mammal	27	—
Total	147	9

a piece of marine shell were recovered. Because these two specimens are not considered part of the vertebrate faunal assemblage, they are discussed separately at the end of this chapter.

The Old Hospital

The Storeroom (SU 29)

The faunal assemblage from the storeroom (n = 35, 23.8%) consists of chicken, mourning dove, cattle, sheep, and goat remains (Table 24.9). Identified chicken elements are a scapular fragment and a tibiotarsus shaft. The mourning dove is represented by a single humerus fragment. Cattle elements consist of four rib fragments, three of which have cut marks, and a sacrum fragment that exhibits cut marks. Sheep is represented by a single humerus fragment and goat by a nearly complete skull. Sheep/goat remains are a scapula fragment with a cut mark and an occipital condyle. The dog-size specimens are all rib fragments, some of which exhibit cut marks. The deer-size specimens include a scapula fragment, rib fragments, and an indeterminate element. The cow-size specimens are rib fragments, vertebrae fragments, and indeterminate elements.

The vertebrate remains from this study unit are likely associated with the later, post-hospital usage of this room. Some of the butchered cattle and dog-size, deer-size, and cow-size elements may represent food refuse associated with the hospital.

Table 24.9. Vertebrate Faunal Remains Recovered from Rooms 1 and 2 in the Old Hospital

	Room 1 (SU 29)		Room 2 (SU 30)	
Taxon	NISP	MNI	NISP	MNI
Catostomidae (suckers)	—	—	1	1
Gallus gallus (chicken)	2	1	1	1
Zenaida macroura (mourning dove)	1	1	—	—
Duck-size bird	1	—	—	—
Indeterminate size bird (eggshell)	—	—	1	—
Bos taurus (cattle)	5	1	19	1
Ovis aries (domesticated sheep)	1	1	—	—
Capra hircus (domesticated goat)	1	1	—	—
Ovis/Capra (sheep/goat)	2	—	5	1
Indeterminate rabbit-size mammal	—	—	4	—
Indeterminate coyote-size mammal	5	—	3	—
Indeterminate deer-size mammal	4	—	6	—
Indeterminate cow-size mammal	13	—	2	—
Total	35	5	42	4

The Spare Room (SU 30)

The vertebrate faunal remains from this room consist of sucker, chicken, eggshell (probably chicken), cattle, sheep/goat, rabbit-size, coyote-size, deer-size, and cow-size mammal bones (Table 24.9). The sucker is represented by a nearly complete branchiostegal ray, and a very large chicken is indicated by the presence of an innominate fragment. The cattle specimens are a rib fragment, a radius fragment, a tibia fragment, vertebrae fragments, and articulated first, second, and third phalanges. The rib, tibia, and several vertebrae are sawed. Sheep/goat is represented by three sawed tibia fragments, a femur fragment, and a nearly complete petrous. The rabbit-size remains are a rib fragment and three long bone fragments. The coyote-size specimens are all rib fragments that exhibit either chopping or sawing marks. The deer-size specimens are a long bone fragment and five indeterminate fragments. The cow-size specimens consist of an indeterminate vertebra fragment and a thoracic vertebra fragment. In general, the elements represent lower-quality meat portions, possibly used in soups and stews.

The Dispensary (SU 31)

This room contained chicken, cottontail, deer-size, and cow-size remains. The chicken is represented by a humerus shaft of a young individual and a furculum. The cottontail is represented by a single complete cervical vertebra. The deer-size specimen is a long bone fragment and the cow-size specimen is an unidentified fragment. The paucity of vertebrate faunal remains from this room indicates it was kept clean of refuse.

Hospital Row

Study Unit 32

The vertebrate faunal assemblage from this room consists of only three specimens representing a turkey-size bird, cattle, and bison/cattle remains. The turkey-size bird is a dentary fragment. Cattle and bison/cattle are each represented by a single long bone fragment. The paucity of vertebrate faunal remains from this room suggests it was not associated with butchering, food preparation, or disposal of food refuse.

Study Unit 34

This room contained chicken, cattle, sheep, sheep/goat, and rabbit-size, coyote-size, deer-size, and cow-size remains (Table 24.10). A large chicken is represented by a single coracoid fragment; cattle is represented by three rib fragments and an atlas vertebra fragment. Sheep is represented by a scapula fragment and sheep/goat by a tibia fragment that exhibits chop marks. The rabbit-size specimen is a rib fragment; the coyote-size, deer-size, and cow-size specimens are all unidentified fragments. One cow-size specimen is worked and may have been used as a tongue depressor (see Modified Bone below).

The paucity of vertebrate faunal remains from this room suggests it was used for purposes other than eating, food preparation, or disposal of refuse. The variety of faunal specimens, however, indicates a diet associated with higher-ranking military personnel.

Study Unit 35

The vertebrate faunal remains in this room consist only of a large chicken tibiotarsus shaft and a deer-size bone fragment. The paucity of remains precludes any interpretations other than indicating this room was not used for the disposal of butchering and food refuse.

Table 24.10. Vertebrate Faunal Remains Recovered from Room 7, Room 8, and the Steward's Room in Hospital Row

	Room 7 (SU 34)		Room 8 (SU 36)		Steward's Room (SU 37)	
Taxon	NISP	MNI	NISP	MNI	NISP	MNI
Medium-size fish	—	—	4	1	—	—
Gallus gallus (chicken)	1	1	4	1	—	—
Indeterminate size bird (eggshell)	—	—	1	—	1	—
Sylvilagus sp. (cottontail)	—	—	1	1	1	1
Lepus californicus (black-tailed jackrabbit)	—	—	—	—	3	1
Bos taurus (cattle)	4	1	—	—	3	1
Bison/Bos (bison or cattle)	—	—	2	1	—	—
Ovis aries (domesticated sheep)	1	1	—	—	—	—
Ovis/Capra (sheep/goat)	1	—	—	—	1	1
Indeterminate rabbit-size mammal	1	—	1	—	—	—
Indeterminate coyote-size mammal	1	—	1	—	—	—
Indeterminate sheep-size ungulate	—	—	—	—	1	—
Indeterminate deer-size mammal	4	—	4	—	8	—
Indeterminate cow-size mammal	2	—	—	—	9	—
Total	15	3	18	4	27	4

Study Unit 36

The vertebrate faunal remains recovered from this room consist of medium-size fish vertebrae, chicken, eggshell fragments (probably of chicken), cottontail, bison/cattle, and rabbit-size, coyote-size, and deer-size bone fragments (Table 24.10). The medium-size fish is represented by a nearly complete caudal vertebra; the chicken is represented by a radius shaft, a nearly complete coracoid, and two humerii fragments. The coracoid and one humerus exhibit cut marks. The cottontail bone is a scapula fragment. Bison/cattle is represented by a scapula fragment and a complete scaphoid. The rabbit-size specimen is a long bone fragment, the coyote-size specimen is a thoracic vertebra fragment, and the deer-size specimens are two thoracic vertebrae fragments and two unidentified fragments.

With the exception of the chicken remains, none of the specimens from this room exhibit butchering. The fragmentary condition of the bones and presence of a bison/cow scaphoid suggest butchering refuse rather than food refuse. In contrast, the chicken remains are food refuse.

The Steward's Room (SU 37)

This room contained eggshell (probably chicken), cottontail, jackrabbit, cattle, sheep/goat, sheep-size ungulate, deer-size, and cow-size remains (Table 24.10). The cottontail remains consist of a single, nearly complete cervical vertebra; the jackrabbit bones are a rib fragment, a radius shaft, and a scapula fragment. The cattle remains are a hyoid, a complete scaphoid, and a calcaneum fragment. Sheep/goat is represented by a complete cuneiform, and the sheep-size ungulate is a lower incisor fragment. Deer-size specimens consist of two vertebra fragments, a long bone fragment, and five indeterminate fragments. The cow-size specimens are four rib fragments, of which two pieces articulate and are chopped; an indeterminate vertebra fragment; a caudal vertebra fragment; and three indeterminate fragments, one of which has striations (see Modified Bone below).

Although this room yielded a large portion of the 1994 vertebrate faunal assemblage, the paucity of remains exhibiting butchering or meat processing suggests it was used for disposal of primary butchering debris. The presence of a cattle scaphoid and calcaneum supports this interpretation. These are very low-meat-yielding portions that would have been removed during initial (primary) butchering. The hyoid is associated with removal of the tongue, which may have been desired as a roast.

Butchering

The old hospital and hospital row yielded 29 bone specimens that exhibit butchering marks. Of these, 19 specimens were identified to a specific taxon: cow, cow-size, dog-size, and sheep/goat (Figure 24.3). With the exception of a sheep/goat-size tibia, long bones and a scapula exhibit saw marks, suggesting the presence of skilled butchers. The vertebrae and ribs exhibit both sawing and chopping, possibly by both skilled (sawing) and unskilled (chopping) butchers. The ribs appear to represent short ribs; all of the long bones, which are tibias, probably represent soup bones. The vertebrae and scapula probably represent ribs and chuck roasts, respectively.

Modified Bone

Two modified bone fragments were recovered, one from Study Unit 34 and the other from Study Unit 37, both from the hospital row. The specimen from Study Unit 34 is of a cow-size mammal. The element, which is unidentified, may have functioned as a tongue depressor. It consists of a piece of compact bone that has been ground and polished. It weighs 3.58 g and measures 62.96 mm long, 21.28 mm wide, and 1.81 mm thick. One end is nearly intact and is slightly convex. The other end is broken. The specimen from Study Unit 37 is also that of a cow-size mammal. This unidentified element has striations on one face and weighs 5.02 g. It measures 52.29 mm long, 19.27 mm wide, and 7.98 mm thick.

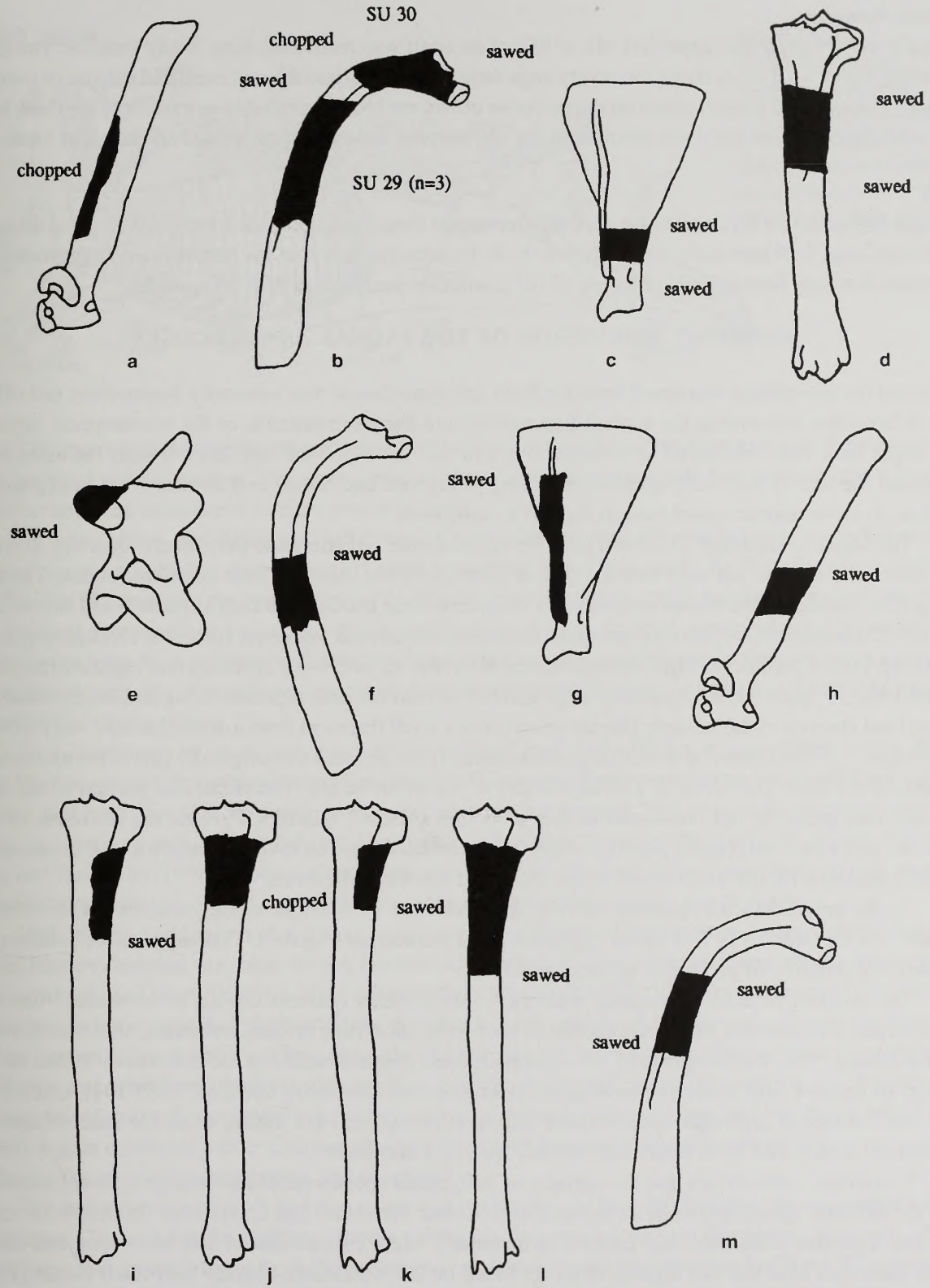


Figure 24.3. *Butcher marks on bones from the old hospital and hospital row: (a) cow thoracic vertebra (SU 36), (b) cow rib (SU 29 and 30), (c) cow scapula (SU 36), (d) cow tibia (SU 30), (e) cow-size cervical vertebra (SU 36), (f) sheep/goat rib (SU 29), (g) sheep/goat scapula (SU 29), (h) sheep/goat thoracic vertebra (SU 36), (i–l) sheep/goat-size tibias (SU 30 [i, k, l] and 34 [j]), (m) dog-size rib (SU 30).*

Human Remains

A single, nearly complete upper left M1 or M2 of an adult was recovered from Study Unit 30. The tooth, exhibiting heavy wear on its cusps, has a very large carie that extends into the root canal and pulp on its posterior portion. The exposed enamel edges on the posterior crown are broken, probably as a result of the tooth being extracted. Its condition and association with the old hospital indicates it represents an extracted tooth.

Shell

A single fragment of a bivalve marine shell was recovered from Study Unit 36. It weighs 0.15 g and measures 15.06 mm long, 4.29 mm wide, and 1.40 mm thick. Its occurrence within the hospital row suggests it was a specimen that may have been kept by an officer or another occupant such as a laundress.

SUMMARY DISCUSSION OF THE FAUNAL ASSEMBLAGES

In general the assemblage recovered from the front gate/guardhouse was extremely fragmentary and offered little information concerning the exploitation of wild and domestic animals, or the consumption strategies that might have been employed at different times in the history of the fort. As a whole, the assemblage suggested the use of both wild species (including pronghorn and bison) and domestic species (goat, pig, chicken) at some undetermined time in the fort's occupation.

The faunal assemblage recovered from the enlisted men's quarters and the officers' quarters, however, provides some insight, not only into the diet of these men, but also into their economic status. There are distinct differences in the faunal assemblages recovered from the enlisted men's quarters and the officers' quarters. Domestic animal remains recovered from the enlisted men's quarters consist of chicken, pig, cattle, and sheep/goat. Chicken remains are represented by a few leg and wing elements and eggshell fragments. For the officers' quarters, the relatively large number of fowl remains represent wing and leg portions. The almost total absence of the sternum (breast meat) (only a small fragment from a duck-size bird was recovered from Room 3 of the officers' quarters) is problematical. If the sternum was originally part of the assemblage, it should have been preserved as well as the rest of the avian bones. Therefore, this portion of the avian skeleton was probably not consumed in this particular officers' quarters. Perhaps the sternums of both domestic and wild fowl (choice portions of the avian carcass) could be found in trash with the commanding officer's quarters. Future excavations at the site could test this hypothesis.

At the enlisted men's quarters, the pig is represented by a single incisor, whereas at the officers' quarters it is represented by five fibula fragments and a metacarpal fragment. This suggests the consumption of hams and possibly of pickled or smoked pigs feet.

The remains of cattle associated with the enlisted men's quarters consist of vertebrae, ribs, front quarters, and hindquarters. Meat cuts consist of neck, ribs, short ribs, brisket, foreshank, arm, chuck, round, and hindshank. With the exception of rib and round, these cuts are ranked in the bottom half based on late-nineteenth-century beef retail values (Figure 24.4) (Stewart-Abernathy and Ruff 1989:104). Choice cuts from both domestic and wild species (deer and deer/pronghorn) are absent from the assemblage. The represented cuts would have been most suitable for soups and stews.

In contrast, cattle bones and the remains of indigenous species (deer and deer/pronghorn) associated with the officers' quarters consist of thoracic and lumbar vertebrae, and anterior rib fragments for cattle, deer and deer-size mammals, and cattle-size mammals. Meat cuts consist of rib, short loin, and sirloin. These meat cuts have the two highest rankings based on late-nineteenth-century beef retail values (Figure 24.4). This suggests meat cuts were distributed to personnel based on military rank. In addition, the occurrence of a variety of locally indigenous taxa (e.g., ducks, turkey, crane, quail, cottontail, black-tailed jackrabbit, and deer) associated with the officers' quarters, compared with the paucity of indigenous taxa associated with the enlisted men's quarters, indicates the officers had access to a greater variety of meat.

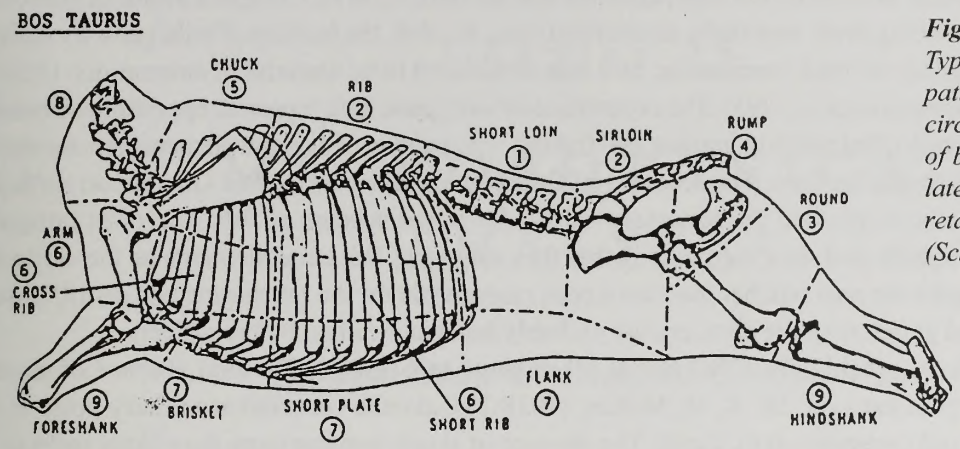


Figure 24.4.
Typical butchering pattern: numbers in circles show the ranking of beef cuts based on late-nineteenth-century retail values (Schulz and Gust 1983).

The absence of sheep/goat remains associated with the officers' quarters contrasts with their occurrence in the enlisted men's quarters. The occurrence of sheep/goat associated with the enlisted men's quarters suggests they were considered a cheap source of meat.

As noted above, the distinctive patterning of meat cuts between the enlisted men's quarters and the officers' quarters indicates distribution of meat according to military rank. At Fort Bowie, Herskovitz (1978:137–138) proposes the association of hindquarters with officers while front quarters are associated with enlisted personnel. At Fort Craig this is not the case. Rather, enlisted personnel were provided with primarily the large limb portions with minimal butchering, suggesting their use in the making of stews and soups. In contrast, cuts of meat associated with the officers' quarters consist of ribs and steaks that were cut for individual consumption.

This dichotomy of meat cuts between the enlisted men and officers is not evident in the faunal assemblage recovered from the new hospital, however. The types of meat cuts represented in this assemblage indicate that both low and high economic value portions are present. The low-value portions consist of chuck, arm, brisket, neck, and hindshank. The higher economic portions are short loin, rib, round, and rump. Crass and Wallsmith (1992:17) suggest that prime cuts were served to hospitalized personnel, and the presence of higher economic value meat cuts in the assemblage clearly substantiates this premise.

Both higher- and lower-value cuts of meat were also present in the faunal assemblage recovered from the old hospital/hospital row excavations. For the old hospital, the low-value portions of beef consist of the feet, foreshank, and short rib, while high-value portions are the rib and sirloin. For the hospital row, the beef low-value portions consist of the hindshank, foreshank, neck, and short rib; the only slightly higher value portion present is the chuck. For sheep/goat, the old hospital has low-value portions consisting of the skull, foreshank, and hindshank; higher-value portions are the chuck and round. In contrast, the hospital row contained the foreshank and hindshank, which are low economic value portions, and the chuck, which has a slightly higher economic value. Chicken remains recovered from both areas consist of high meat-yielding portions—the proximal wing, breast, and drumstick.

The presence of both high and low value cuts within the old hospital/hospital row assemblage is not unexpected. Throughout the buildings/rooms existence, they served various functions—hospital, offices, storerooms, and quarters for both civilian workers (i.e., laundresses) and unmarried officers. The mixing of the cuts within the assemblage is clearly a reflection of the different occupants, especially in those rooms that served as quarters, Rooms 4–8.

The occurrence of pronghorn, deer, wildfowl, and fish indicates the occasional procurement of wild animals for food purposes. Hunting was a common practice at military posts in the Southwest (Parmalee

1967:45). In its early years, hunting by military personnel was encouraged at Ft. Craig as a means of improving marksmanship and providing food, especially for enlisted men. In 1868, the hunting of wild game by enlisted men was ordered halted by the post commander, as it was considered to be wasteful of ammunition (Marion Grinstead, personal communication, 1993). The occurrence of wild game may represent opportunistic hunting practices rather than a concerted effort in hunting and fishing. The paucity of skeletal elements representative of wildlife suggests this to be the case. The recovery of fish remains indicates the Rio Grande had sufficient water, at least seasonally, to provide the necessary habitat for larger species of fish. The most intriguing aspect of the few pronghorn and deer elements is that they represent the same elements as the cattle and sheep/goat. This suggests the post butcher may have been responsible for the butchering and distribution of the meat of larger wild game, with the choicer cuts probably being consumed by the officers.

What is considered notable about the faunal assemblage recovered is the total absence of skunks. According to former post surgeon, Dr. R. H. McKay (1918:28), skunks occurred at military posts in the Southwest in general and especially at Ft. Craig. The absence of skunk remains more than likely reflects the manner in which their carcasses were disposed—probably well away from the confines of the fort.

Finally, several butchering patterns are discernible within the faunal assemblage. Massive bones, such as cattle vertebrae, ribs, and long bones, have usually been sawed rather than chopped. The placement and quality of the cuts suggest that the butchering of cattle was generally performed by skilled butchers. As indicated in the earlier discussion concerning cattle (see natural history section), at one time the army directly employed a butcher at each post to cut fresh beef quarters, supplied by contractors, into smaller meat portions. Later, the contractors had to provide their own butchers to cut up and issue the beef (D. A. Miller 1989:187).

The cattle assemblage basically reflects normal nineteenth-century butchering patterns. After skinning and gutting, the head and feet were removed and discarded. Limbs were removed at the joints, usually with the use of a saw. Humeral and femoral heads, scapulae, and pelves were either sliced off (witness the recovery of 18 sawed, small portions of humeral and femoral headsin the new hospital assemblage) or completely removed. The carcass was sawed down either side of the vertebral column, forming sides of beef. Vertebral processes tended to be removed at this time. Then the sides were reduced to various desired cuts. A similar pattern was discerned at Cantonment Burgwin (Crass and Wallsmith 1992:16).

In contrast, although sheep/goat vertebrae and ribs are often sawed, long bones are frequently chopped at various locations along their shafts. This chopping pattern, as opposed to disarticulating the carcass at the joints, suggests that at least a portion of the butchering process was performed by personnel who lacked knowledge of commercial butchering techniques. Reportedly, when enlisted men butchered their own cattle they tended to waste meat because they lacked knowledge of proper butchering techniques (D. A. Miller 1989:201). This pattern is similar to Spanish colonial butchering practices observed in assemblages from the Rio Grande Valley near Albuquerque (Brown and Brown 1997). Since sheep were probably obtained locally, it is possible that initial butchering (e.g., skinning, gutting, removal of the head and feet) was done by the person who supplied the sheep. Initial butchering may, however, have been carried out by enlisted men. The sawed vertebrae and ribs indicate that splitting and further reduction of the carcass were probably conducted by a butcher. ✠

Chapter 25

MACROBOTANICAL ANALYSES

Glenna Dean & Richard G. Holloway



THREE FLOTATION AND TWO MACROBOTANICAL SAMPLES taken from the trash concentrations outside the front gate and the burned deposits within the bakery were submitted for analysis. Relatively few charred seeds were observed in the scan of the flotation samples. Those results, and the identifications of the other macrobotanical samples, are discussed following a presentation of laboratory techniques and theoretical issues.

LABORATORY TECHNIQUES AND MICROSCOPY

The flotation of the five samples was accomplished by AHRI personnel following the generally accepted flotation procedure. In summary, this procedure involved dumping the dry soil sample into water, mixing it slightly, and pouring the water and suspended light fraction into chiffon cloth supported by a fine screen. Addition of more water and stirring of the residue, followed by pouring off the light fraction, were repeated until particles were no longer seen in suspension when the residue was stirred.

The fine, "floated" matter was dried and screened through geological sieves of 4.0 mm, 2.0 mm, 1.0 mm, and 0.5 mm. Material falling through the 0.5 mm screen was labeled as "fines." Residues from each screen and the fines were placed in labeled coin envelopes.

For the sample reported here, all items except the fines were scanned, or examined in a relatively cursory manner, by systematically raking through each screen's residue with a dissecting probe while the sample was being viewed through a stereoscope at a magnification of at least 7.5×. None of the recovered light fraction was subsampled at the microscope. In the scan process, all items greater than 2.0 mm were completely examined. This size range is likely to include corn kernels and cupules, for example. Of the items smaller than 2.0 mm, only those present as more than a single occurrence are apt to be seen in a scan. Scanning, then, can reflect the presence (or absence) of larger items, but only the relative abundance of smaller items. That is, rare small items are likely to be tallied as "absent."

The presence of charred and uncharred plant and animal material was tabulated but not quantified during the scan. Representatives of each identified item were placed in gelatin capsules for quick location in any future reexamination, and then were bagged in the coin envelopes along with each screen's residue.

The usual second step of a flotation analysis is to conduct a full-sort of the light fraction residues, during which all charred seeds are retrieved and counted. This procedure yields the number of seeds per unit

of bulk sample before flotation, and the result is comparable from sample to sample. As discussed in more detail below, however, data resulting from the apparent increase in precision does not necessarily inprove our understanding of past environment or human behavior.

For the Fort Craig flotation sample, high diversity of taxa or high numbers of individual taxa were chosen as two critera which would cause a full-sort to be performed. Unfortunately, the diversity of charred taxa was limited and the numbers of seeds within each taxon were also small. With this lack of charred seed diversity and abundance, it is unlikely that the increased precision of a full-sort would increase our understanding of the site or its inhabitants. Thus, the flotation data presented in this report are derived solely from the scan of light fractions and are, therefore, unquantified.

Identification of seeds was made by comparison to published works (Martin and Barkley 1961; Musil 1963; Reed 1970), as well as to physical reference specimens. Following Minnis (for example, 1978:362), and in consideration of the nature of the archeological features at Fort Craig, only charred materials are interpreted here to be cultural in origin. All other materials are judged to be recent (natural) additions to the archeological record.

After the scan was completed, samples of wood charcoal were also examined and identified using a stereoscope and magnifications up to 30×. Clean cross-sections were made following the "snap" method of Koeppen (1972), and identifications were made by comparison to published works (Barefoot and Hankins 1982; Volman 1981), as well as to physical reference specimens.

LIMITATIONS OF FLOTATION DATA

Flotation samples are generally taken to gain information on past plant use and, indirectly, past environment. Yet, because archeological sites are prone to disturbance by rodents and bioturbation by insects and other biological agents, uncharred plant remains must usually be viewed as more recent introductions and excluded from archeological interpretation. This means that charred remains are the usual focus of flotation analysis, and contexts containing ash and charcoal are common sampling locations.

Plant remains are usually carbonized accidentally, however, and even the recovery of carbonized plant remains does not necessarily reflect past environment or human behavior. That is to say, even if a particular plant or plant part was an important food source for a past human population, little evidence of that importance would appear in the flotation or macrobotanical record if no accidents caused carbonization and preservation of identifiable remains. Assessing the numbers of recovered plant remains by means of a scan or a full-sort realistically reflects only those remains, and that is not necessarily the same thing as reflecting the environment or food preferences of the group under consideration. Sparse carbonized plant records may mean that other, uncarbonized plants were the past target resources, or that other, nonplant resources were the focus of activities conducted at the sites. For Fort Craig, any use of canned foods, metal cooking pots, or iron stoves may have also affected the carbonized plant record, as may have the feeding of food wastes to stock animals.

To summarize, the analysis of flotation samples usually concentrates on charred plant remains in a conservative effort to exclude naturally deposited, uncharred elements introduced to the sampling locus by disturbance and bioturbation. All of the light fraction greater than 0.5 mm recovered from the samples were examined microscopically; the low yield of carbonized seeds is real and not the result of a sampling error at the microscope.

RESULTS AND DISCUSSION

Front Gate

One flotation sample and two macrobotanical samples recovered from Test Trench 1 were examined for charred remains and wood speciation. The plant taxa identified during the scans of the flotation material are listed in Table 25.1. Table 25.2 presents the charred seeds observed during the scan of the sample; only the tiny seeds of grass and wild, weedy taxa were seen. Although several taxa are represented, none of the seeds occurred in sufficient quantity to suggest that they reflect human use. Instead, the sampling locus (a trash pile outside the front gate) suggests an area of high traffic and ground disturbance. It may be that the charred seeds result from the burning of weeds in that area during the use of the fort (Peggy Gerow, personal communication 1990).

It is interesting that no remains of cultivated plants were found in the flotation sample. This suggests that such foods, if grown near the fort, were not disposed of at the sampled locus. Alternatively, canned foods may have been relied upon to the extent that few remains of cultivated plants were available for carbonization and preservation. The use of metal pots and iron stoves for cooking, and the feeding of food wastes to domesticated stock, would have additionally limited the opportunities for cultivated plants to become carbonized and enter the archeological record.

Table 25.1. Charred Plant Remains Identified from Flotation and Macrobotanical Samples

Taxon	Common Name
*?Populus**	Cottonwood (probable identification)
*Prosopis**	Mesquite
Chenopodium/Amaranthus	Goosefoot/Pigweed
Portulaca	Purslane
Gramineae	Grass family

* Seen as wood charcoal only

Table 25.2. Charred Seeds Found in Scan of Flotation Sample from Trash Pile outside Front Gate (Unless otherwise noted, only charred botanical remains are included.)

IDENTIFIED REMAINS	
	Chenopodium
	Portulaca
	Gramineae
INDICATORS OF DISTURBANCE	
	unburned rootlets
	feces
	chitin
	unburned woody material
	terrestrial snail shell (*Hawaiia* type)
OTHER	
	wood charcoal (only 4 mm and 2 mm screens noted)
	unidentified tiny seeds of 3 or 4 wild plant taxa
	charred animal bone fragment
	unidentified charred plant material

In contrast to the wood identified from the fort itself (Chapter 21), none of the analyzed subsample of wood charcoal in the flotation sample represents pine or juniper construction material. Instead, 14 of the 20 charcoal pieces examined were identified as probable cottonwood, with mesquite (1) and unidentified hardwood (5) comprising the remaining 6 pieces. These woods may represent fencing materials, spent cooking fuel, or both.

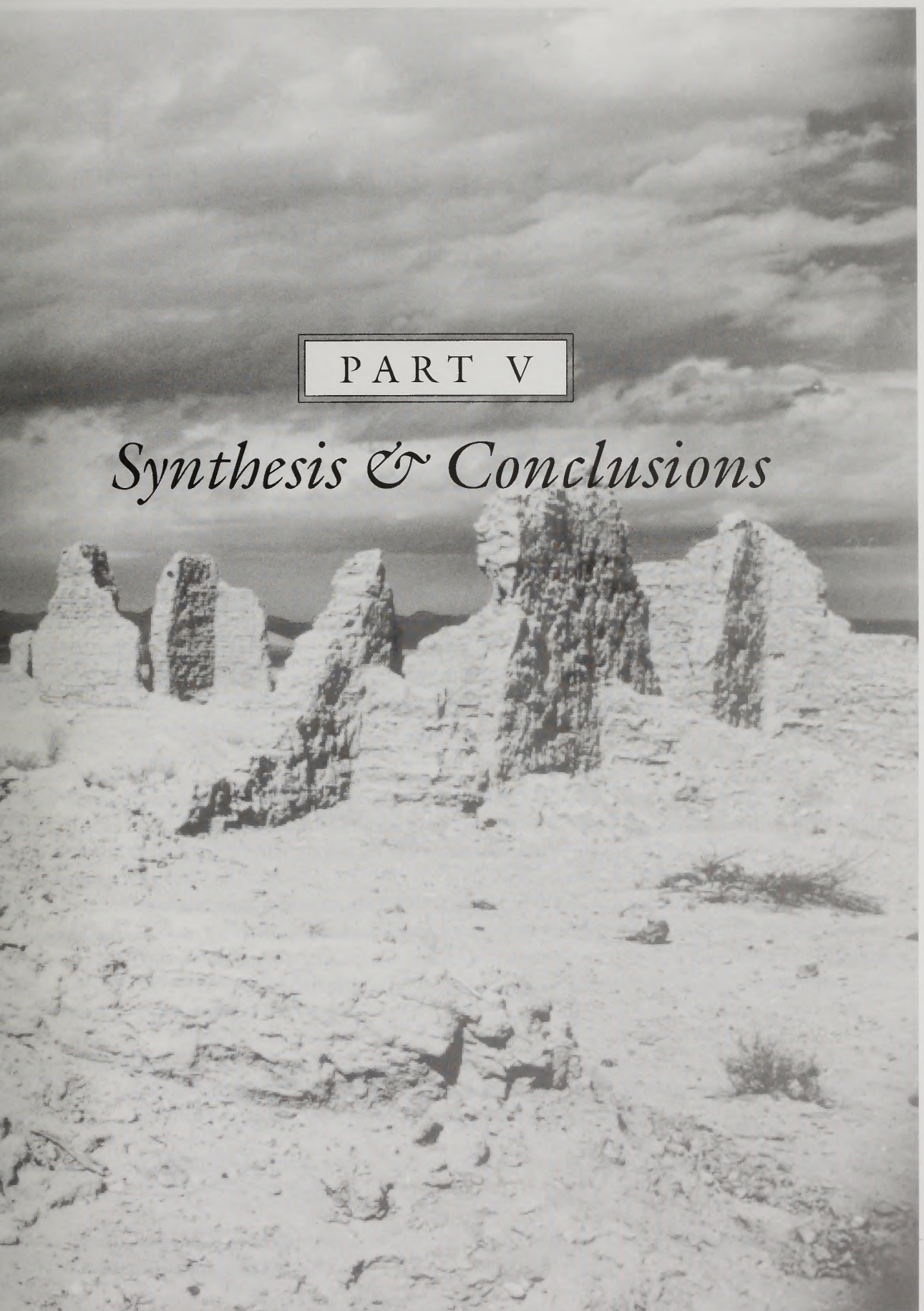
The second macrobotanical sample consisted of a large fragment of charred wood from the same front gate trash pile. The wood was identified as probable cottonwood.

The third and final macrobotanical sample submitted for analysis was a lump of stained clay from north of the trail inside the front gate. The clay was thought to contain organic material when excavated by the field crew. No organic remains were observed in the laboratory, and no further analysis of the material was performed.

Soldiers' Quarters

Two flotation samples were taken from burned deposits found in front of the oven. In both cases, bone was present along with several small pieces of unidentifiable hardwood charcoal. No other charred remains were found in these two samples. *Populus* wood was identified from another context at Fort Craig (Chapter 21), but there are many other possibilities.

The macrobotanical results were disappointing, but the small pieces of hardwood charcoal may be *Populus*, which was present in the charred samples recovered during the 1990 season. This type of wood is present in the nearby bosque. ✠

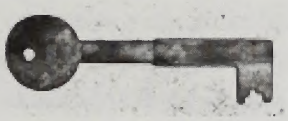


PART V

Synthesis & Conclusions

Chapter 26

ARCHITECTURE, ARTIFACTS, & ROOM FUNCTION



PORTIONS OF FIVE DIFFERENT BUILDINGS WERE EXAMINED over the course of the field seasons. This chapter discusses the architectural remnants remaining in the buildings and the artifact assemblage recovered from some of the rooms in order to shed light on their function and/or to enhance the existing documentary descriptions. The main questions on room function concern Rooms 5 and 6 of the soldiers' quarters; the officers' quarters; and the old hospital/hospital row. The new hospital was a hospital from the time it was built to the fort's decommissioning; thus there is no question regarding the function of its rooms. The same holds true for the south guardhouse/offices. A comparison of the bakery to other military bakeries of the period is also presented.

THE FRONT GATE

Of all the areas examined during the five seasons of fieldwork, the front gate probably has the least amount of descriptions in the historical records. The excavations that we conducted did little to shed light on the architecture of the sallyport or the rooms on the north side of the trail, but instead raised a lot of new questions regarding these edifices.

The building on the south side of the modern trail first functioned as a guardhouse, and later, when the guardhouse was built on the north, it became offices for the commanding officer, adjutant, and subsistence officer. The notorious underground prison cells for prisoners in solitary confinement were under this building. Early plans of the fort (1854, 1865) depict this building as originally having three rooms. The 1866 and 1884 plan shows only two rooms.

Architectural Features

Although the excavations examined only 15 m^2 in the northern part of the south guardhouse, some general observations can be made regarding the architectural features of this building.

Walls. Only a portion of the northern wall was exposed. It was constructed of adobe bricks measuring 19 by 8 by 4 inches and was 23½ inches high.

Plaster. The interior walls were covered with 2–3 cm of mud coping with a thin veneer of white plaster. Only one plastering episode was evident.

Baseboards. No baseboards or evidence of baseboards was found.

Flooring. The floor level was marked with 5–8 cm of hard, compacted dirt. This building supposedly had wood floors installed in 1881, but no floorboards or joists were found. They may have been scavenged after the fort was abandoned.

Foundation. No evidence of a foundation was found.

Roofing. Numerous wood shingles were found in the roof/wall fall strata, indicating the building had a shingled roof. According to the records, the roof was shingled in 1884.

Windows. Window glass was recovered from the roof/wall fall strata, but not enough of the room was excavated to plot the distribution of window glass. There may have been a window on the north side. Several pieces of wooden window trim and caulk were also recovered. A few of the trim pieces exhibited a teal-blue paint, and some of the caulk fragments were painted a brick red.

Doorways. Various plans of the fort depict a doorway on the north wall opening into the sallyport (Chapter 9). No door was found on this wall, but we may not have exposed enough of the wall to find the door.

Interior Features. No interior features were found. A subfloor test pit was dug 50 cm below the floor and a 40 cm deep auger hole was punched down below this lower level to probe for evidence of the subterranean prison cells. Nothing was found, which suggests that we probably did not go deep enough.

THE SOLDIERS' QUARTERS

Documentary sources describe Fort Craig as a two-company post, with each set of enlisted quarters encompassing dormitories, kitchen, mess hall, noncommissioned officer's quarters, laundresses' quarters, and storerooms arranged around a placita (Billings 1874; Headquarters 1876; Wallace 1975). Information detailing which room in the western set of enlisted quarters served which purpose is, for the most part, lacking. Except for the two squad rooms across the front, it appears that room function and even room size changed during the occupation of the fort (Chapter 10).

As Grinstead points out in Chapter 10, the identification of buildings/rooms is frustratingly sketchy prior to 1877 and after 1877 becomes even more so, with the post quartermaster referring to the "upper" and "lower" enlisted quarters. Even the various plans of the fort do not provide much information regarding the functions of the individual rooms.

The 1866 plan (Figure 10.3) shows six rooms in both of the ells off the two front squad rooms. In addition, what appear to be three smaller rooms are abutting the back side of the squad rooms and two other small rooms are perpendicular to the last room of the west ell. These five rooms are in the placita and may have been added to accommodate the increased garrison strength during the Civil War. No evidence of these rooms is visible today. This whole set of rooms is labeled soldiers' quarters, but none of the rooms are labeled. This plan does show doorways opening into the placita.

In an 1876 description of the posts in the Military Division of the Missouri (Headquarters 1876), the plan of Fort Craig shows no separate rooms in the western ell, which is labeled a kitchen. The eastern ell is depicted as divided in half, with the southern half designated laundresses' quarters and the northern half as part of the front squad room. Both ells are L- shaped. This obviously is a very generalized plan of the fort layout, but it is conceivable that both the kitchen and the laundresses' quarters were located in the southern rooms of the ells.

The 1878 plan (Figure 9.1) has neither room nor room designations labeled. It does show the laundresses' quarters as being located in the rooms along the east side of the fort. One small room is still depicted as being perpendicular to the southern room of the east ell inside the placita.

The last plan of the fort, that of 1884 (Figure 10.5), depicts four rooms within the western ell and six rooms in the eastern ell. No rooms are depicted within the placita, and the bakery (No. 18 on the plan) is shown in the southern room of the east ell. The different rooms outlined within the western quarters on this plan are visible on the surface today (Gerow 1988).

Architectural Features

Because time did not allow the complete excavation of the various rooms within the ell, excavation units were judgmentally placed to maximize the information potential of the room, including its architectural features. Only one room, Room 5, was completely excavated. Although upwards of 10 feet of walls have eroded away, some general characteristics are still present.

Walls. All the walls were made of adobe bricks measuring 19 by 8 by 4 inches. Room 1 had walls standing 20–24 inches high. The walls in Room 5 ranged between 24 and 36 inches high, and the walls in Room 6 stood 12–16 inches high.

Plaster. Remnants of numerous plastering episodes were evident on all interior walls. The plaster was white and underlain by ¼- to ½-inch mud coping. There was no evidence of any of the plaster being painted.

Baseboards. There was no evidence of baseboards in any of the rooms. In Rooms 5 and 6 the plaster lips at the wall/floor juncture.

Flooring. Room 1 had a jaspe floor. Patches of intact jaspe were still present along the walls. Rooms 5 and 6 had wooden floors as several floor joists and floorboards were still in place. The floorboards were tongue-and-groove pine.

Foundation. No foundation was evident in any of the rooms.

Roofing. The abundance of wood shingles found in the roof/wall fall strata in Room 1 suggests that the roof over this room was shingled. In Rooms 5 and 6, large, 2- to 4-inch-thick slabs of jaspe were found in the roof/wall fall strata, which implies that these rooms still retained the jaspe roofs.

Windows. According to historical descriptions and photographs, Room 1 had three windows, two of which were across the front. A large amount of window glass was recovered in the southern portion of the central north/south trench, which suggests the third window may have been in the southwestern quarter of the southern wall.

The presence of a large quantity of window glass indicates Room 5 had a window. The concentration of this glass in the northwest corner indicates that the window was probably in this corner of the wall.

Window glass was also recovered in Room 6, which suggests that this room also had at least one window. Not enough of this room was excavated, however, to ascertain the possible location of the window(s).

Doorways. Evidence of three doorways was present—one in Room 1 and two in Room 5. In Room 1 only the outline of a 1-m-wide doorway was exposed. This door was centrally located in the eastern wall and opened into the hallway.

In Room 5 an interior doorway to the next room was located on the north wall in the northeast corner and a probable doorway opening into the placita is situated along the northern end of the east wall. This latter feature is marked by an eroded low point in the wall, which exhibits no evidence of plastering. Both of these doorways were 1 m wide. There is no interconnecting doorway with Room 6.

Interior Features. The northern wall of the Room 1 was bisected by an adobe chimney measuring just over 9 feet wide and extending about 20 inches into the room. Plastering was evident on the front. The width of this chimney suggests that it may have been an open fireplace at one time. The lack of an open front indicates that by the time the fort closed the room was probably heated by a stove.

A shared chimney was found in the center of the wall dividing Rooms 5 and 6 and appears to be a remodeled fireplace for Room 6. The chimney extended approximately 19 inches into the room and measured a little over 6 feet across. It consisted of a double row of adobe bricks; the inner row had burned. Plastering was evident behind the outer row of bricks and along its sides and front, which suggests that it had been remodeled to accommodate a stove. The flue measured 2 feet wide.

Artifacts and Room Function

Room 1, across the front of the ell, functioned as a squad room throughout the duration of the military occupation of the fort. For the most part, the artifact assemblage recovered from this room came from the roof/wall fall strata, which means their depositional context is ambiguous. They were primarily bottle glass fragments, nails, miscellaneous metal, and wood shingles. A smoking pipe was recovered from the chimney flue. No artifacts were found on the floor, but some window glass and nails were found just above the floor. None of these artifacts would preclude the inference of this room being the squad room.

All of the functional categories described in Chapter 15 are represented within the artifacts recovered from Room 5. By far the majority of artifacts are pieces of bottle glass, but also present are buttons, bullets, cans, buckles, cast iron pot fragments, utensils, dish fragments, smoking pipes, horseshoes, and a brass key. This variety of artifacts suggests household use, such as a messroom.

Messrooms often functioned as more than just a dining area. These rooms were used for gaming, playing cards, reading, conversing, etc., similar to a day room (Brown 1986; Hardesty 1978). At Fort Larned, the tables were removed on occasion for parties and dances (Brown 1986). Thus the artifacts recovered from Room 5 are consistent with a room of this type. The two horseshoes may appear to be out of place, but given that they are blank shoes, they may have been hung on the wall for luck. Descriptions of other messrooms show that numerous items were used for wall decoration, including Mexican and Civil War prints and Indian artifacts (Brown 1986).

The artifacts recovered from Room 6 consisted primarily of bottle glass with cans, nails, bone, dish fragments, and burlap cloth also present. More than 80% of the condiment bottle fragments came from this room. These latter artifacts along with the burlap sack remnants and the evidence of burning indicate that this room was probably the kitchen. Condiments would have been used in the preparation of food for the company, and the sacks may have contained foodstuffs such as dried beans. The probability of this being the kitchen is also borne out by the 1876 plan of the fort and by a report from the post surgeon (Billings 1875) stating that both fireplaces and stoves were used in meal preparation (Chapter 10).

THE OFFICERS' QUARTERS

Twin sets of officers' quarters were located directly across the parade ground from the two sets of enlisted men's quarters. Like the enlisted men's quarters, the officers' quarters were built in a U-shape with an inside placita. These quarters housed both married officers and their families as well as unmarried officers. Married officers presumably lived in the rooms in the ell and the single officers had a large room in the front.

In the 1870 report on *Barracks and Hospitals*, Billings described the quarters as consisting of a 20 by 15 by 12½ foot central hallway flanked on either side by a 20 by 20 by 12½ foot bedroom. Adjoining one of these bedrooms was a 20 by 20 by 12½ foot dining room, which connected with another 20 by 15 by 12½ foot hallway with a servant's room and a 20 by 20 by 12½ foot kitchen (Billings 1870). The only other room for which the function was known was the small northeast room in the eastern ell. Early plans of the fort show this room as being used for ordnance storage (Chapter 11).

Throughout most of the fort's 31-year existence, the number of rooms within the western ell remained at six. The 1873 plan, however, shows the number as being seven; the smaller room had been divided in half (Chapter 11).

From the various plans of the fort, it would appear that only minor alterations to some of the rooms occurred during its occupation—primarily the size of the middle rooms and the placement of doors. These changes suggest that perhaps the functions of the rooms also changed.

Architectural Features

As with the soldiers' quarters, time did not allow the complete investigation of all the rooms in this portion of the officers' quarters; therefore, excavation units were judgmentally placed to maximize the amount of information retrieved from each room. Only three of the rooms—Rooms 1, 3, and 4—were completely excavated to the floor. Several subfloor units were dug in Room 1. Architectural features are limited owing to the loss of 10+ feet of wall height. Nevertheless, general descriptions can be offered for some features.

Walls. All the walls were constructed of adobe bricks measuring 19 by 8 by 4 inches. The height of the walls varied depending on the state of preservation. In Room 1, the eastern and northern walls ranged in height from 10 to 25.6 inches but most of the western and southern walls were either severely eroded or gone. The exposed walls in Room 2 ranged in height between 12 and 37 inches, while those in Room 3 were between 18 and 24 inches high. In Room 4, the southern, western, and southern half of the eastern walls were between 12 and 24 inches high. The northern half of the eastern wall, however, was only 6 inches high. The walls in Room 5 were between 2 and 6 inches high, which, based on the position of the floor joists, means that only the footings remained.

Plaster. Remnants of 3–6 plastering episodes were evident in all the rooms except Room 5. With the exception of Room 4, the various layers of plaster were white. In Room 4, however, pink paint was present on one of the plaster layers.

Baseboards. In situ baseboards were present in Rooms 1 and 3. These boards measured 1 by 6 inches and were painted blue. Small wooden pegs were found inset into the western wall of Room 6 at the same height as the baseboard in Room 1. These pegs were probably used to attach a baseboard to this wall.

Flooring. Either in situ floor joists or remnant floorboards were found in every room. The joists were standard two-by-fours, and in Room 3 the joists were placed on 25-inch centers. The floorboards are one-by-fours and were either half-lapped or tongue and groove.

Foundation. No foundation was evident in any of the rooms except along the northern wall in Room 5. This foundation was composed of basalt cobbles and measured 20 inches wide. From its placement against the adobe footings, this foundation appears to have been added rather than part of the original construction.

Roofing. Scraps of corrugated roofing tin were found in Rooms 1 and 2, suggesting that at least these two

rooms did have a tin roof. One wooden shingle was recovered from the fill of Room 3, which suggests that a portion of the roof was also shingled. Given that only one shingle was found, this is speculative.

Windows. Window glass was recovered from all the rooms, indicating that all the rooms had at least one window. Photographs of the front of the quarters show that Room 1 had at least two large, multi-paned windows on the southern wall. Because the remaining wall height within the rooms is below window level, the exact style and size of the windows are unknown. Distribution maps of the window glass fragments suggest that the window in Room 3 was on the western wall, whereas the window in Room 5 was on the eastern wall facing the placita.

Doorways. Excavations revealed six doorways, all in the eastern half of the quarters. The doorway in the middle of the eastern wall of Room 4 opened onto the placita and measured 5 feet wide; the rest of the doors measured 39 inches wide. Two of the doorways were inset along their interior walls to accommodate a wooden threshold and framing elements. The remaining doors had no insets or adobe brick thresholds.

Interior Features. A double fireplace was shared by Rooms 1 and 2. This fireplace consisted of adobe columns extending into each room for ca. 28 inches. The portion of the fireplace in Room 1 had a raised brick hearth, while the half in Room 2 had a raised adobe hearth. From the size and depth of the hearth areas, these fireplaces were probably used for heating and not for cooking. Similar fireplaces were found at Fort Fillmore; all had raised adobe hearths (Wilson 1966b).

Room 3 had a small hearth in the southwest corner. This feature consisted of a raised board platform that probably supported a small corner stove. The platform's presence above the board floor indicated that the stove was probably put in after the installation of the wooden floor. Given the size of the platform, the stove would probably have been quite small and used for heating this room. A crude corner hearth constructed of gypsum slabs was built over this platform, possibly after the fort was deactivated.

Artifacts and Room Function

The artifacts recovered from the various rooms encompass all functional categories; thus complicating the interpretation of room function. One of the primary reasons underlying the difficulty is the layer of trash and gravel used to level the floors in Rooms 1, 2, and 6.

If we follow the description given by Billings (1870) then Room 6 was the central hallway; Room 1, a bedroom; Room 2, the dining room; Room 3, a bedroom; Room 4, a second hallway; and Room 5, the kitchen. The 1865 plan also labeled Room 5 as the kitchen (Chapter 11).

Excluding the trash layer, the artifacts recovered from the rooms do support some of the designations. The high percentage of personal items and gender-specific artifacts recovered from Room 3 indicate this room was probably used at one time as a bedroom by children, possibly by a female servant, and by an officer and his wife.

The use of Room 5 as a kitchen is borne out by the high percentage of food refuse remains, condiment bottle fragments, household/mess artifacts, and ceramic wares. The ash-stained area near the northern wall suggests that a stove had been here.

Nothing in the artifact assemblage recovered from Room 1 contradicts the documentary evidence that this room was a bedroom. The high percentage of ceramic wares does suggest that at some point this room may have been used as a dining room.

The same premise holds true for Room 2. None of the limited number of artifacts recovered from this room contradicts its use as a dining room. Its proximity to the kitchen via the hallway also supports this designation.

The dearth of artifacts from Room 4 gives no indication that this room was anything more than a hallway. Given its layout and connecting doorways to Rooms 2, 3, 5, and the placita, it seems unlikely that the room would have been used as a living area.

Not enough of Room 6 was excavated to draw any conclusions regarding its function. Most of the artifacts came from the Stratum 4, the trash and gravel layer, so their depositional integrity is questionable.

THE NEW HOSPITAL

Built to replace the aging original hospital, the new hospital consisted of two ward rooms separated by a 10-foot-wide, 22-foot-long hallway. The western ward was for the buffalo soldiers and the eastern ward was for the white soldiers. This building remained the post hospital until the fort was closed; thus the functions of the rooms are known.

Each ward measured 30 feet long by 22 feet wide and had walls 14 feet high. Two 4-foot by 6-foot windows were found on the south and north walls. Entrance into each ward was through a centrally placed doorway in the hallway. Each ward was heated by a fireplace located on the west wall of the black ward and the east wall of the white ward.

Architectural Features

Walls. The walls were constructed of adobe bricks measuring 19 by 8 by 4 inches. These were laid in a double row, making the walls 27 inches thick unlike the 19-inch-thick walls of the south guardhouse, soldiers' quarters, and officers' quarters. The walls ranged in height from 4 inches to 20 inches.

Plaster. All the interior walls exhibited remnants of ¼- to ½-inch-thick white plaster. Several patches of pink plaster were present in the white ward, which suggests that these walls may have been painted at one time.

Baseboards. No baseboards were found in the wards or hallway. However, pieces of wooden blocks found embedded in part of the wall in the southeast corner of the white ward may have been used to attach baseboards to the walls.

Flooring. No floor joists were present, but numerous pieces of 1-inch-thick tongue-and-groove floorboards were found at the approximate level of the floor. In addition, a 4-inch-wide ledge located along the interior edge of the stem wall probably served as a footing for the floor joists. Numerous wood shims used to level the floor were still present on this ledge, especially along the southern wall.

Foundation. The entire building was constructed on a basalt foundation consisting of footings and stem walls. The footings were constructed of one or two courses of irregularly sized basalt cobbles set within a (probably) hand-dug trench. Footings were present under all the exterior walls and the two interior walls of the hallway.

Stem walls, also constructed of shaped basalt cobbles, were then placed on top of the footings. These stem walls averaged 20 inches high by 16 inches wide and were present only under the exterior walls.

Roofing. Several fragments of corrugated roofing tin were recovered. These pieces suggest that the jaspe roof was replaced by a metal roof.

Windows. The floor plan of the hospital shows two 4-foot by 6-foot windows along the south and north walls of each ward. No windows are depicted in the hallway. The small amount of window glass recovered from the two wards suggests that most of the windows had been removed, probably after the military abandonment of the fort.

Doorways. Two centrally located doorways opening into each ward were present in the east and west walls of the hallway. Each of the doorways measured ca. 4 feet wide and had adobe brick thresholds underlying the tongue and groove flooring. Remnant pieces of two-by-six framing elements were present in the fill of each doorway. Battleship-gray painted floorboards were present in the doorway to the white ward.

Interior Features. Both wards were heated by a fireplace centrally located on the west wall of the black ward and the east wall of the white ward. Each fireplace was constructed of adobe bricks placed on the compacted surface below the floor and extending ca. 50 cm into each ward, with the external wall of each ward being incorporated into its construction. Wing-walls measuring 25 cm long extended are on either side of the hearth. Each hearth was plastered with ca. 2-inch-thick jaspe.

OLD HOSPITAL AND HOSPITAL ROW

After the completion of the new hospital in the mid-1870s the rooms of the old hospital served numerous functions, including a kitchen, dispensary, and storeroom. Several rooms were also added onto the east side of hospital row and were used as quarters (both military and civilian) and various offices. Three rooms within the old hospital were completely excavated and five rooms in hospital row were partially excavated.

Architectural Features

Walls. All the walls were constructed of adobe bricks measuring 19 by 8 by 4 cm. In Rooms 1–5 the walls were 19 inches thick, but in Rooms 6, 7, and 8 the walls were 27 inches thick. Wall height varied depending on the state of preservation. In the three completely excavated rooms, the walls ranged from a low of 13 inches to a high of 38.6 inches. In the remaining rooms, the exposed walls measured between 15.7 and 30 inches high.

Plaster. Numerous plastering episodes were evident on all the interior walls. All of these layers were white. The plaster in Rooms 6, 7, and 8 was applied over ¼-inch-thick cement coping.

Baseboards. In situ baseboards were found in Rooms 1 and 3. Those in Room 1 were located on either side of the doorway in the northwest corner and were painted white over a blue underlay. In Room 3 the baseboards were present on the eastern and southern walls and along a small portion of the northern wall. These boards were painted blue.

Flooring. An intact jaspe floor was present in Room 1 and a mixed jaspe/wood floor was in Room 4. All the other rooms had evidence of wood floors.

Windows. Window glass was found in all rooms. The 1884 plan of this building (Figure 13.3) shows six windows in Rooms 1, 2, and 3—two on the east and west walls of Room 1, one on the east wall of Room 2, and one on the west wall of Room 3. The location of the windows in the remaining rooms is not clear.

Doorways. Sixteen 1 m wide doorways were documented—eight exterior and eight interior. Five of the exterior doors opened onto the parade ground and three opened to the back. Three remodeled doorways were also present, two in Room 5 and one in Room 6. All three had been closed off by a single-width row of adobe bricks.

Interior Features. Three fireplaces and two remodeled fireplaces were found. Room 1 had an open fireplace located on the south wall. Corner fireplaces were found in Rooms 7 and 8. The two remodeled fireplaces were on the south walls of Rooms 2 and 3. The original openings had been filled by adobe bricks to accommodate stoves.

Artifacts and Room Function

The 1884 plan of the old hospital labels Rooms 1, 2, and 3 as a storeroom, spare room, and dispensary, respectfully. The rooms to the south are not depicted; thus we do not know how these rooms were used other than the fact that they functioned as both offices and quarters.

The majority of artifacts recovered from the various rooms came from the roof/wall fall strata, which makes their depositional context ambiguous. These artifacts cross-cut all the functional categories. Nails, bottle fragments, and miscellaneous metal fragments dominate the floor assemblage, but several artifacts found in the floor level in a few rooms do provide some clues as to room function.

Portions of surveying instruments were recovered from Room 1, the storeroom. This room may have been used to store equipment or, given the domestic artifacts, may have been quarters for an army engineer. The presence of the quart-size beer bottle in the fireplace suggests that it functioned as more than just a storage facility.

The highest quantity of hospital-related artifacts came from Room 2, labeled the spare room. The glass tubes, the medicine/prescription glass fragments, and two chemical jar stoppers suggest that the room was probably used by the post surgeon for keeping medical supplies.

Rooms 4–8 clearly functioned as quarters. These rooms had the highest percentage of domestic artifacts as well as personal items, such as coins, the cufflink, perfume bottle, doll fragment, smoking pipe fragments, and the fishing swivel. The perfume bottle and doll fragment imply the presence of females. The majority of the military buttons and insignia also came from these rooms, which suggests a military occupation, more than likely by officers given the economic status of the artifacts.

THE BAKERY

Historical records indicate that baking activities at Fort Craig were conducted in variety of locations before the bakery in the southernmost room of the east ell of the western enlisted quarters was finally constructed in 1882 (Chapter 10). The excavations showed that it encompassed two rooms and the foundation or furnace of the oven. The archeological evidence suggests that the three were not constructed at the same time and that the bakery itself underwent some degree of remodeling.

The original room, before subdivision, measured 28½ feet north-south by just over 21½ feet east-west. After subdivision, what is perceived to be the main baking room measures 12 feet north-south by 20.3 feet east-west, the smaller northwestern room measures 15.4 feet north-south by 8 feet east-west, and the oven foundation measures 12½ feet north-south by 8¾ feet east-west.

The walls, measuring 19 inches thick, were made of adobe and were built on a basalt foundation. The foundation is visible along the western and southern walls. Numerous plastering episodes are evident on the remaining walls. A possible doorway opening into the placita is located near the center of the western wall.

Both wooden and jaspe floors were revealed in the various excavation units. The small, northwestern room contained both types of floors, while the larger, southern room exhibited a wooden floor, portions of which exhibited evidence of burning.

No shingles were recovered from the roof fall stratum, suggesting that the bakery had a dirt and jaspe roof. As in Rooms 5 and 6, this inference is supported by the presence of jaspe slabs and gravels intermixed within the stratum.

While it is fairly clear that the largest room probably represents the main baking room, the style and construction of the oven and the function of the smaller room is not as clear. Through comparisons with other frontier fort bakeries, a general description of the oven and the function of the small room as a storeroom or quarters for the post baker can be ascertained.

Other Frontier Bakeries

A variety of bakeries and ovens occurred at other military installations prior to 1882. The first standard for military bakeries was published in 1872 by the Quartermaster General's Office. While this publication provided some guidelines, it lacked detail. The second set of standards was published 10 years later by the commissary general, Major George Bell, CS, USA. This publication, entitled *Notes on Bread Making, Permanent and Field Ovens, and Bake Houses*, provided the first comprehensive design for standardization of military ovens.

These plans were used at Fort Laramie in the construction of the 1884 bakery, and it is likely that they were used in some capacity to construct the 1882 oven at Fort Craig. Although military regulations provided standards and required written estimates for construction, post bakeries were not one of the more important buildings on a fort and consequently regulations were often ignored. Their mention is typically left out of correspondence (Sheire 1968:10).

The typical configuration of the bakehouse in frontier forts consisted of three or four rooms (Figure 26.1). The oven opened into a workroom where the bread was made. One room served as a storeroom for the bread rations and another as the baker's sleeping quarters. Often the workroom served as a storeroom for the bread as it was removed from the oven (Sheire 1968:4).

The oven constructed in the 1882 bakery at Fort Craig is similar to the single oven bakery described by Bell (1882:39–87). The three standard-size, single ovens measure 6.5 feet by 8 feet, 8 feet by 10 feet, and 10 feet by 12 feet. The 6.5 foot oven "had a capacity of 500 rations per bake or 1,500 per diem. They were fired by placing the fire within the oven, heated to the required temperature, and then the fire was scraped out" (Sheire 1968:2). The workroom was used for preparing the dough.

The thick basalt/brick walls of the Fort Craig oven furnace/foundation not only provided support for the structure, its thick walls probably helped to maintain the heat during the baking process. Although the oven at Fort Craig is not identical to those described by Bell, there are some similarities. Figure 26.2 illustrates the single-oven construction depicted in the 1882 standard. The front of the oven (A) faced the workroom and the furnace (B) was found immediately behind. The chimney (C) was situated to one side and the baking compartment (D) extended well into the furnace.

Although only the lower portion of the Fort Craig oven remains intact, its dimensions and those of the bakery are similar to the ones described by Bell (1882:81). The outside width of a single-oven bakery should measure 21.23 feet; the Fort Craig bakery measures just over 21.5 feet wide. Bell describes the length of the oven and furnace as 15 feet; the Fort Craig oven measures 12.5 feet. The Fort Craig furnace and oven measures 8.75 feet by 12.5 feet on its interior and roughly 15 feet by 12 feet on the exterior; this is just slightly larger than the ovens in the military standard.

The single oven at Fort Craig could provide a large number of bread rations each day. Bell (1882) outlined the number of loaves that could be baked in a single episode (Table 26.1). The actual capacity depends on the thickness of the walls, as the dimensions provided above are exterior measurements. Bell (1882:48) allows for a maximum thickness of three bricks and a minimum thickness of two bricks. It is likely that the Fort Craig's oven produced at least as much as the maximum rations described for the 10-foot by 12-foot oven. An oven this size can produce at least 450 rations per bake. If an oven that produces 500 rations per bake produces 1,500 rations per diem, as described above, three baking episodes can occur in a day. These data suggest that the oven at Fort Craig could produce up to 1,350 rations per day.

It is unlikely that this large amount of bread was needed by the companies that were stationed at the fort during this period. At other posts, bread was routinely sold to civilians to bring in money to the company fund, so it is conceivable that the practice held true at Fort Craig.

Table 26.1. Oven Capacity

Size (in feet)	Number of Loaves	
	Minimum	Maximum
6.5 by 8	144	180
8 by 10	240	300
10 by 12	360	450

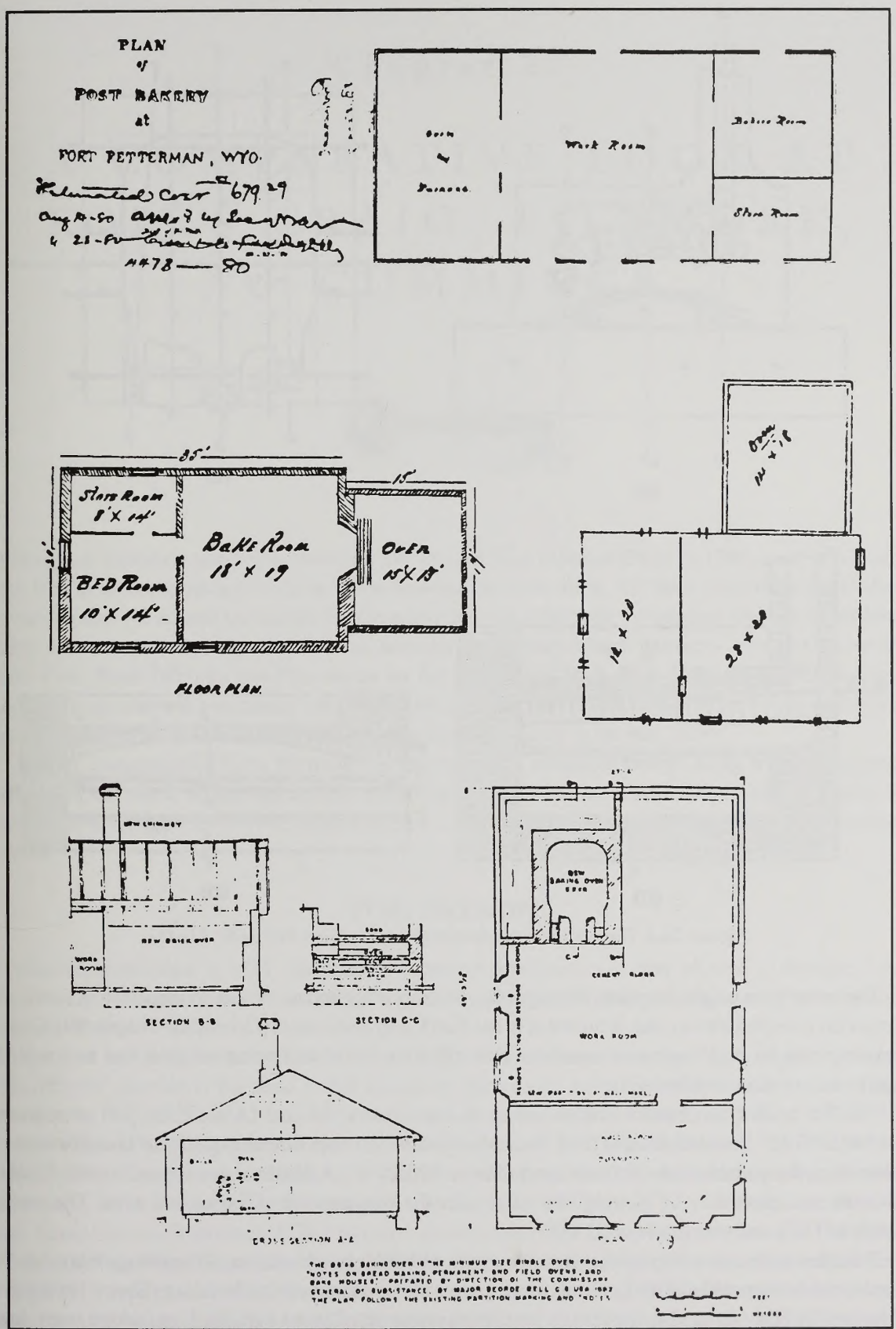


Figure 26.1. Plans of bakeries from other frontier forts (from Bell 1882:87–91)

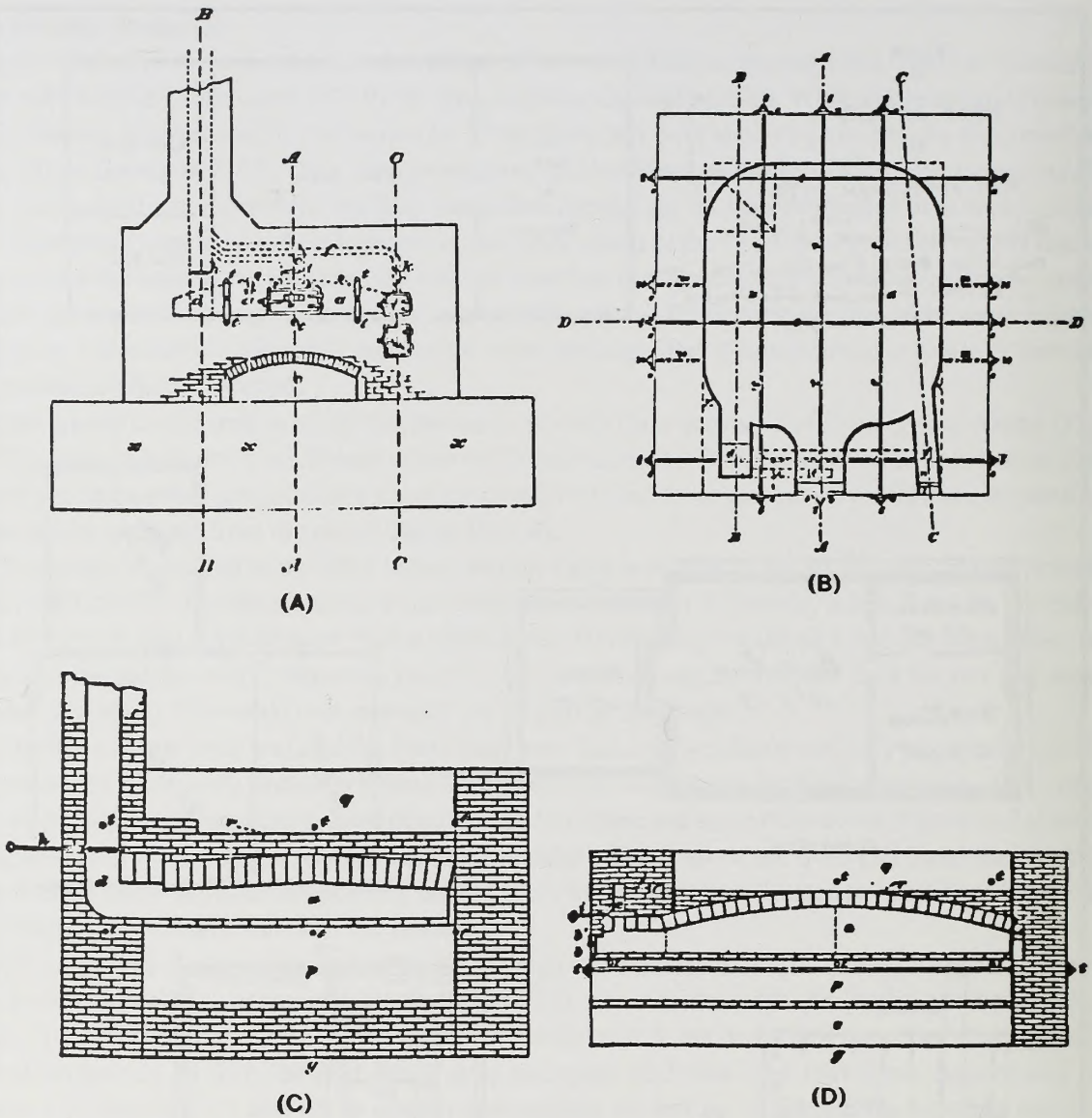


Figure 26.2. The military standard single oven (from Bell 1882:41–43).

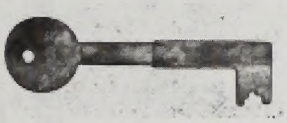
The ovens often required repairs. The saga of oven remodeling and new oven construction at Fort Laramie illustrates the complex history that is hinted at in the Fort Craig documents (Grinstead, Chapter 10). Generally the reason given for building a new oven was either that the old oven burned out or it was no longer large enough to meet ration requirements.

The fire brick often burned out, requiring routine repairs. At Fort Laramie the first oven was used from 1849 until 1872, a considerable time. Records indicate that over time the quality of bread became poor, thus requiring the construction of a new oven (Sheire 1968:5–6). Additional correspondence indicates that a new oven was needed by 1874, only two years after the construction of the second oven. The new oven was built in 1876 and was in use until 1883.

Bakeries were commonly built in new locations, although in some cases old buildings were converted. The last oven constructed at Fort Laramie was incorporated into an existing building (Sheire 1968:16). The 1882 bakery at Fort Craig also appears to have been constructed in an existing large adobe room that the 1876 plan labels as laundresses' quarters. It is not known where the former bakery was located. ✠

Chapter 27

A COMPARATIVE LOOK AT FORTS CRAIG, FILLMORE, & CUMMINGS



THE FORT CRAIG RESEARCH DESIGN was modeled after those of Fort Fillmore (Powder 1988) and Fort Cummings (Staski 1989a) so comparisons could be made between the three forts. All three forts were established for the same purpose—to control the hostile Indians and to provide protection for travelers and nearby settlements. All three were located on or near major routes through the territory of New Mexico—Fort Craig near the old Camino Real, Forts Fillmore and Cummings on the Butterfield Trail. Both Fillmore and Cummings had Butterfield Stage stations associated with them, although the station at Cummings had been destroyed just before the fort was built. Subsequent stage lines utilized the route in the late 1860s.

A brief description of Forts Fillmore and Cummings is presented below, along with a description of the archeological work conducted at both sites. This is followed by a comparison of the results of the archeological investigations from all three forts and a discussion of the research questions based on the data recovered.

FORT FILLMORE

Fort Fillmore, established in 1851, was the southernmost fortification in New Mexico at the time. Located approximately 5 miles southeast of La Mesilla, it was designed to house two companies of infantry and two of dragoons (Mozer 1967).

The post buildings were laid out in a U, with the enlisted barracks and offices comprising the wings and the officers' quarters at the head. Other structures, such as the hospital, sutler's store, and corrals, were located nearby (Figure 27.1). All buildings were built of adobes with flat dirt roofs (Wilson 1966b, 1967).

Fort Fillmore had only been in existence for 10 years when the Confederate Army moved into the area on July 25, 1861. Troops were ordered out of the fort to march on Mesilla, which had been occupied by the Confederates. After a request for the unconditional surrender of the town was refused, a small skirmish ensued. Three Union soldiers were killed and six were wounded. The Union forces retreated to Fort Fillmore. The following morning, Major Isaac Lynde, Fillmore's commander, ordered the abandonment of the fort. That night the troops evacuated the fort under cover of darkness. The Confederates learned of the evacuation the next morning and gave chase. Major Lynde surrendered his entire force at San Augustine Pass outside of Las Cruces (Mozer 1967).

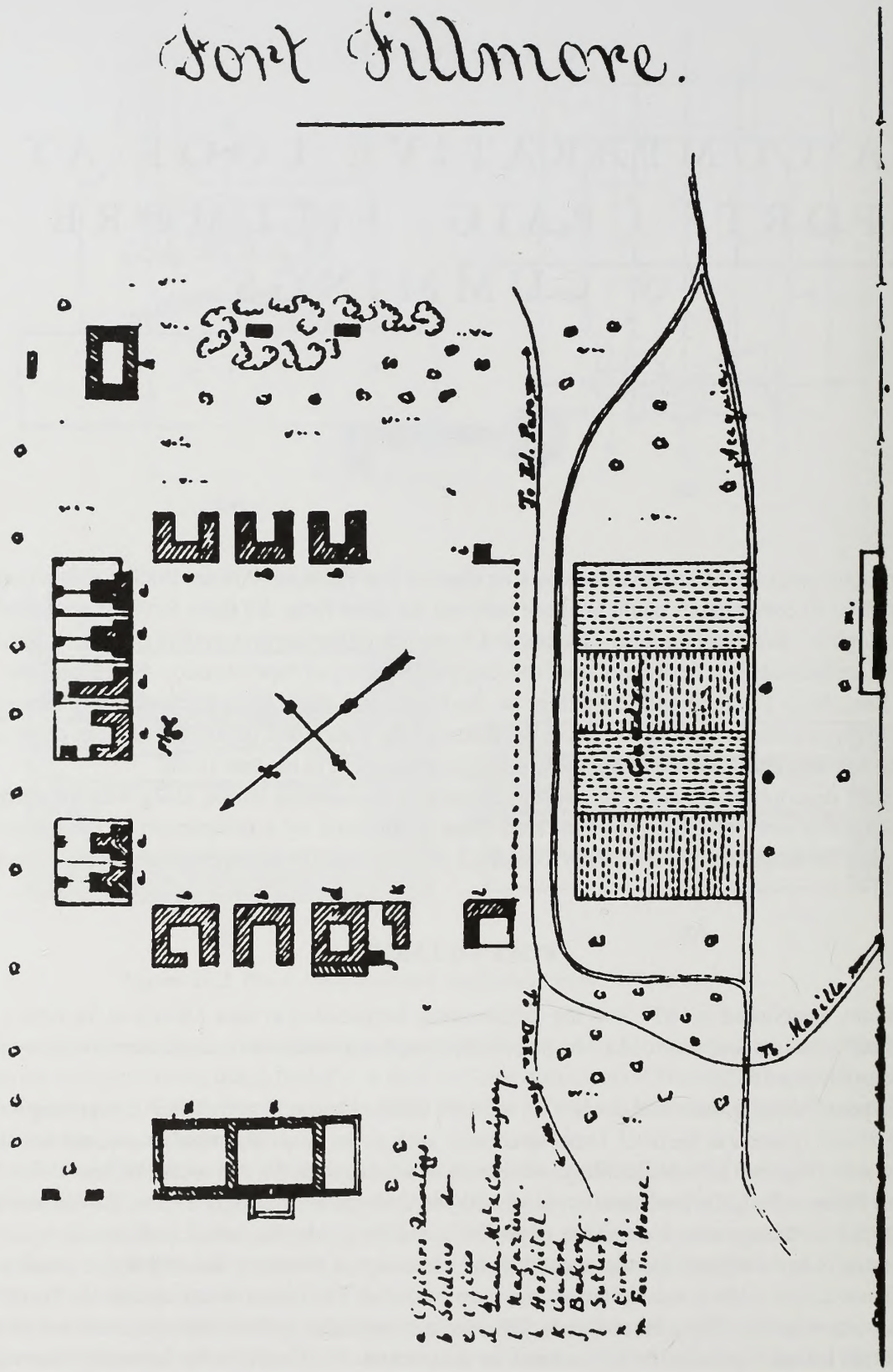


Figure 27.1. *Mansfield's 1853 map of Fort Fillmore (from Frazer 1963, Plate 13).*

Confederate forces briefly occupied the fort its abandonment by the U.S. army. Union forces reoccupied the fort in August 1862, but it was in such a state of disrepair that they were ordered to withdraw to Mesilla in October. The post was officially abandoned on November 13, 1862 (Mozer 1967).

Archeological Investigations

The first systematic archeological work at Fort Fillmore was done by John Wilson in 1966. The landowner wanted to level the site for agricultural purposes and permitted the Museum of New Mexico to conduct salvage excavations before the site was destroyed. This work resulted in the excavation of one building in the officers' quarters, the latrine behind it, and half of the enlisted men's barracks. Also sampled were four refuse areas (Wilson 1966b, 1967).

Twenty years later, more excavations were conducted at the site by the New Mexico State University field school in the summer of 1986 and 1987. Once again portions of the site were going to be destroyed for a pecan orchard. These excavations focused on extensive surface collection and testing to probe for subsurface features that could be impacted by the orchard (Staski 1989b).

FORT CUMMINGS

Fort Cummings was established in October 1863 at Cooke's Spring northeast of Deming as part of Gen. James Carleton's scheme to bring an end to the "Indian problem." The original post measured 320 by 360 feet and could sufficiently house 100 men and 65 mules and horses. The post was surrounded by a 10-foot-high adobe wall built for protection against Apache attacks (Figure 27.2). The original fort was later expanded outside the walls (Couchman 1990; Staski 1995).

Exorbitant maintenance costs combined with a period of relative peace with the Apaches led to the abandonment of Fort Cummings in December 1873. Six years later, increased hostilities with the Apaches sent troops back to the fort in November 1879. The fort was officially reactivated the following summer (Couchman 1990).

A cessation of Indian hostilities in 1885 resulted in the second abandonment of the fort in May of that year. It was briefly reoccupied in 1886 when a heliograph station was established at Cooke's Peak. With Geronimo's surrender in September 1886, the hostilities with the Apaches finally ended. Fort Cummings was officially closed in 1891; the military reservation was turned over to the Department of the Interior (Staski 1995).

Archeological Investigations

The first systematic archeological investigation at Fort Cummings and immediate vicinity was conducted by New Mexico State University field schools between 1989 and 1992. This work consisted of mapping and excavation of the fort on BLM land, the Butterfield Stage station, the spring house, an extensive trash dump, and the corral. Limited testing was also done at the original fort, located on private land (Staski 1995).

Three structures are situated on the BLM land—a standing adobe structure, a stone structure, and what was termed the excavated structure. No work was conducted in the standing adobe structure, but it was mapped. Excavations were conducted in the other two. None of the functions of these structures have been positively identified. They were probably built during the second occupation (Staski 1995).

COMPARISONS

The excavations conducted at Forts Fillmore, Craig, and Cummings have provided insights into the role of the military and military life in New Mexico. Since we are limited to archeological data, similarities and

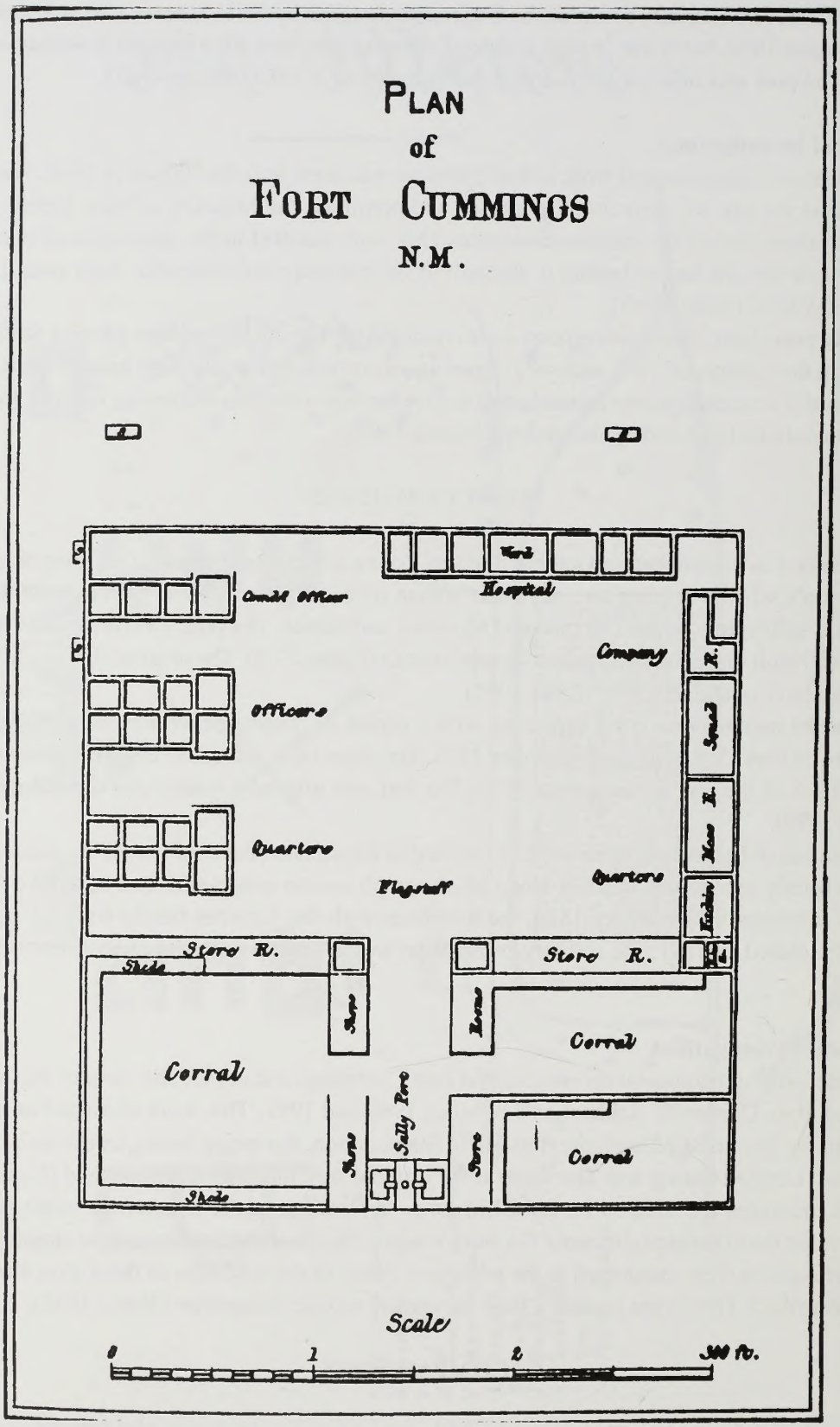


Figure 27.2. Plan of Fort Cummings ca. 1876 (from Headquarters, Military Division of the Missouri 1876:162).

differences can best be viewed architecturally and within the artifact assemblage. The following discussion utilizes data from Staski (1995) for Fort Cummings and Wilson (1966b, 1967) and Staski (1995) for Fort Fillmore.

Architectural Features

The majority of buildings at all three forts were built primarily of adobe. Both Fort Craig and Fort Cummings had stone guardhouses/prison rooms, and part of the commanding officer's quarters at Fort Craig was constructed from stone. Fort Cummings had one stone-walled building. All the buildings at Fort Fillmore were adobe.

Walls. The walls of the excavated structures at Fort Fillmore were double-width. Most of those at Fort Craig and Fort Cummings were single-width (wall thickness equal to the length of the brick). At Fort Craig double-width walls were found in the new hospital and on the quarters added on to hospital row. Double-width walls were found on the southern half of the east exterior wall and portions of the west exterior wall of the excavated structure at Fort Cummings.

Plaster. Interior plastering was present on the walls at Fort Craig and Fort Fillmore. Most of these episodes consisted of limestone whitewash. Limited evidence of painted walls was found in several of the rooms at Fort Craig. No painted walls were found at Fort Fillmore. Plaster was mentioned in the list of architecturally related artifacts at Fort Cummings, so apparently at least some of the walls were plastered.

Baseboards. No baseboards are mentioned for Forts Fillmore and Cummings. Several of the rooms at Fort Craig had baseboards or evidence of baseboards.

Foundation. None of the buildings at Fort Fillmore had foundations. At Fort Craig the new hospital, the bakery, and Room 5 in the officers' quarters had basalt foundations. A rock foundation was evident for the excavated structure at Fort Cummings.

Roofing Materials. The buildings at Fort Fillmore had dirt roofs. Wooden shingles were recovered at Fort Cummings, and wooden shingles, corrugated tin, and jaspe slabs were found at Fort Craig.

Doorways. All the buildings at Fort Craig and Fort Fillmore had 1-m-wide doorways. The sills at both forts were either adobe bricks, puddled adobe, or wood. No doorways are described for Fort Cummings.

Floors. Fort Fillmore had either packed adobe or red-tiled floors. Wood floors were evident at Fort Cummings. Fort Craig had either jaspe or wood floors.

Fireplaces. The fireplaces at the three forts were either centrally located on the walls or in the corners. The former were more predominant at Fort Craig, whereas the latter were more prevalent at Fort Cummings. Several of the fireplaces at Fort Craig were remodeled to accommodate stoves.

Artifact Assemblage

The artifacts recovered from the three forts are very similar in terms of types. As would be expected, earlier-style bottles were more prevalent at Fort Fillmore, while cans were found in greater frequency at Forts Cummings and Craig. Smoking pipes were also more abundant at Fort Fillmore.

It would appear that the artifact assemblages are also very similar functionally. The distribution of artifacts by functional category is presented in Table 27.1. The Fort Fillmore assemblage is from the 1986 and 1987 excavations. The description of the 1966 Fort Fillmore assemblage is primarily qualitative rather

Table 27.1. Artifacts by Functional Categories from Forts Craig, Cummings, and Fillmore

	Fort Craig		Fort Cummings		Fort Fillmore	
Functional Category	N	%	N	%	N	%
Military	227	1.4	3	<1	4	<1
Munitions	304	1.8	64	1.0	244	3.8
Subsistence/Mess	3271	19.5	1096	17.9	1519	23.9
Indulgences	3856	23.1	299	4.9	280	4.4
Architecture/Construction	5228	31.3	4257	69.5	3965	62.5
Furniture	328	1.9	152	2.5	158	2.5
Personal/Clothing	307	1.9	175	2.8	178	2.8
Transportation	40	0.2	ND		ND	
Medical	148	0.9	ND		ND	
Stockraising/Subsistence	17	0.1	ND		ND	
Communication	33	0.2	ND		ND	
Indeterminate/Other	2941	17.6	78	1.3	0	0.0

ND = no data

than quantitative, so it is not included in the table.

Artifacts representing the architecture and construction category dominated all three assemblages. The subsistence-mess category was the second largest at Forts Cummings and Craig but the third largest at Fort Craig. The indulgences category ranked second at Fort Craig but third at the other two forts. Fort Fillmore had the highest percentage of munitions recovered, whereas this category constituted only a small percentage of the total assemblages from Craig and Cummings. The military assemblages are almost negligible at Forts Cummings and Fillmore. Both Cummings and Fillmore had higher percentages of artifacts in the personal-clothing and furniture categories than Fort Craig.

Some of these differences probably reflect the length of occupations. More than likely they can be attributed to the areas of excavation. More extensive work was conducted in the trash dumps and latrines at Fort Fillmore and Fort Cummings, whereas at Fort Craig more excavations were conducted in the buildings. Nevertheless, all three artifact assemblages do provide a picture of life at the forts that otherwise is missing or limited in the documentary records.

ADDRESSING THE RESEARCH QUESTIONS

Since the research designs for all three forts were similar, some general statements can be made about the research issues based upon the archeological and historical record.

Economic Status of Personnel

Clear distinction between officers and enlisted men was evident at Fort Craig based on architecture and the artifact assemblage. At Fort Fillmore a distinction is seen architecturally, but descriptions of the artifacts are not sufficient for drawing any conclusions. Artifacts recovered from the officers' latrine allude to a higher economic status. At Fort Cummings no clear distinction between the officers and enlisted men could be delineated in the trash dumps and architecture. No clear distinction could be made between the civilians and military personnel at the three forts.

Impact of the Local Economy

At all three forts the majority of the building materials were locally available. Locally produced ceramics were found at Fort Craig and in greater abundance at Fort Fillmore. None were identified in the archeological

record at Fort Cummings, but Forts Craig and Fillmore were much closer to local settlements. Use of local labor is evident in the records of all three forts. For the most part, the impact of the local economy was greater at Fillmore and Craig than at Cummings.

Adaptation to the Local Environment

At all three forts the faunal assemblages indicate that the diet of the personnel was supplemented by wild game. Fish was also evident in the assemblages from Forts Craig and Fillmore.

Water was in close proximity to all three forts—the Rio Grande to Forts Craig and Fillmore and Cooke's Spring to Fort Cummings. The gathering of firewood, however, was a problem at both Craig and Cummings owing to the distance from good sources. Wood gathering is not described for Fort Fillmore; presumably it came from the bosque.

Role of the Railroad

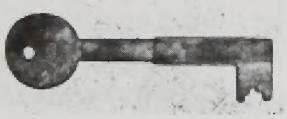
Both Fort Craig and Fort Cummings were greatly impacted by the railroad as evidenced by the increase in post-1880 materials. The railroad had not yet arrived in New Mexico when Fort Fillmore was abandoned.

Impact of Vandalism

All three sites have been impacted by vandalism. The scavenging of materials at Fort Fillmore began almost immediately after it was abandoned. Both Forts Craig and Cummings had civilian occupants after they closed. For the most part, though, the archeological record indicates that treasure hunting has not impacted the archeological integrity of the remaining materials to a large extent. Natural erosional processes have taken a greater toll at these sites. ✠

Chapter 28

SUMMARY & RECOMMENDATIONS FOR FUTURE RESEARCH



THE EXCAVATIONS CONDUCTED AT FORT CRAIG were quite successful given the limited amount of field time and number of participants. Although modifications to the research design had to be implemented in order to maximize the data recovery, the excavations recovered material and data that enabled us to address most of the various research topics and to meet the goals of the project.

This chapter addresses the research issues outlined in Chapter 3 using the data recovered from the excavations and historical research. As is commonly the case in archeological research, our investigations raised more questions than could be addressed by the information recovered. These questions form the basis for the recommendations regarding future research.

ECONOMIC STATUS OF PERSONNEL

The artifactual material recovered from the various quarters indicate a definite economic difference between the officers and the enlisted men. Although limited in number, the frequency of wine and champagne bottles was greater in the officers' quarters than in the enlisted men's quarters. Other differences were evident in the higher quantity of tin cans, the greater amount of semiporcelain ceramics, and the higher percentage of personal items, all of which indicate a higher economic status among the officers.

Economic differences were also evident in the faunal assemblage. It appears that the officers received better cuts of meat than the enlisted men. Both groups supplemented their diet with wild game, but a greater variety of wild game was found in the faunal assemblage recovered from the officers' quarters than in the one from the enlisted men's quarters.

Architecturally the differences are harder to discern because of the loss of more than 10 feet of wall height in the various quarters. Given what remains, however, some differences are obvious. First and foremost is the size of the rooms. The officers had larger rooms for themselves, if single, and multiple rooms if married. Second, some of the doorways within the officers' quarters appear to have been designed to support more elaborate framing elements than those in the enlisted quarters, which were relatively simple and plain.

As noted in Chapter 26, we were not able to determine where the civilians and laundresses lived in hospital row. Thus we were not able to address this aspect of the economic status of Fort Craig personnel.

One other aspect of this research topic that we tried to address concerned the economic status of the

black soldiers stationed at the fort. Since we did not know which of the rooms in the soldiers' quarters were used by these troops, it was hoped that the excavations in the black ward of the new hospital could address this issue.

For the most part, the material remains indicated that there was no difference in economic status. Architecturally, the two wards were identical in construction methods, size, and interior features. The artifacts recovered were more indicative of the difference in economic status between officers and enlisted men than between the white and black soldiers.

On the other hand, the historical records imply that some differences were present. The Surgeon General's report of 1870 stated that black prisoners were kept in a separate prison room from the white prisoners. The room for the white prisoners was heated by an open fireplace but there "is neither fireplace nor stove in the room occupied by the colored prisoners" (Billings 1870).

Billington (1991) writes that the black soldiers often had poor equipment, as substantiated by the following letter ordering the requisition of a surprisingly large number of shoes and hose for two companies of the 125th Infantry, which presumably had been issued inferior uniforms.[1]

Hd. Qrs. Post Fort Craig NM
November 30th 1866

Meinhold Chas. Captain
A.A.Q.M.

Captain:

The Col. Comdg. directs that you make requisition at once for the following number of pairs of shoes and hose for Co. "A" & "B" 125th US CT.

15 pairs	No.	5	15 pairs	No.	6	25 pairs	No.	7
75 "	"	9	70 "	"	10	50 "	"	11
35 "	"	12	20 "	"	13			

Total 305 pairs

I am very respectfully
Your obedient servant
N. G. Wheeler
1st Lieut and Post Adjutant

Correspondence from the fort indicates problems with Company C of the Thirty-eighth Infantry. Racial prejudice may have been at the root of some of the accusations.

Head Quarters Fort Craig
Nov. 10th, 1867 N.M.

To
The Commanding Officer
Company C 38th US Inf.

Sir:

I am directed by the Bvt Maj. Genl Comd'g to call your attention to the following extract from "Remarks" in the Guard Report for this morning, Viz: "Visited Company Kitchens and quarters at 12:15 P.M. One half the beds and bedding in Co. C. quarters, 38th Inf, was out of order, either entirely down or not properly arranged. Filth and old shoes &c scattered over the floor."

The Commanding Officer further directs that you bring to trial the non commissioned Officer or Officers who may be responsible for the above report for neglect of duty.

Very Respectfully, your Obdt Servt
Chas. Penney
2nd Lieut and Adjt 38th Inf.
Post Adjt.

Head Quarters Fort Craig N.M.
November 14th 1867

To
The Commanding Officer
Company "C" 38th US Infantry

Sir:

Your attention is invited to the following extract from "Remarks" in the Guard Report of the Post for this morning. Viz: "Visited Co. quarters at 12:30 P.M. found quarters cleanly swept. Found food well prepared excepting the bread of C Co. 38th Infantry which was sour. The beds and bedding of "C" Co. 38th Infantry with but few exceptions were out of order."

Very respectfully
Your obedient servt.
By order of Bvt. Maj. Gen. C. Grover
Lt. Col. 38th Inft. Commdg.

Head Quarters Fort Craig N.M.
November 14th, 1867

To:
The Commanding Officer
Company "C" 38th U.S. Infantry

Sir:

In consequence of the frequent reports made by the Officer of the Day of the want of good police and order about your company quarters, the Commanding Officer directs that, until further orders, you make an inspection of them in person, three times each day between Reveille and retreat at such time as you may think advisable.

Immediately after Reveille the quarters and company grounds should be well policed and beds carefully folded except those of the sick in quarters. After guard mounting the beds of the old guard may be down til 12 M but not afterward.

Very respectfully, your obt. servt
Chas. Penney
2nd Lt. and Adjt. 38th Infty. Post Adjt.

Head Quarters Fort Craig N.M.
January 21st 1868

To/
The Commanding Officer
Company "C" 38th U.S. Inf.

Sir:

I am directed by the Commanding Officer to invite your attention to the following extract from the Remarks in the guard report for this morning. Viz: "Visited Co. Quarters at noon, "C" Company 38th Inf. had nothing (for dinner) but hard bread and bacon. They said that [they] had no wood to cook dinner with."

Very Respectfully
Your Obt. Servt.
Chas. G. Penney
2nd Lt. and Adjt. 38th Inf
Bvt. Capt. U.S.A. Post Adjt.

Head Quarters Fort Craig N.M.
February 21st 1868

To/
The Commanding Officer
Co. "C" 38th U.S. Infantry

Sir:

It has been reported to these Hd. Qrs. that men of your company are in the habit of going hunting nearly every day and the Commanding Officer directs that you take such measures as will effectually and entirely stop the practice, which he regards as tending to the wastage of a great deal of expensive ammunition, besides endangering the lives of travelers.

Very Respectfully
Your Obt. Servt.
Chas. G. Penney
2nd Lt. and Adjt. 38th Inf
Bvt. Capt. U.S.A. Post Adjt.

Head Quarters Fort Craig, N.M.
April 2nd 1868

To/
Capt. Chas. Meinhold
3rd U.S. Cav. Off. of the Day

Sir:

It has been reported to these Hdqrs. that the Sergt of the Guard is lending a part of the wood supplied for the use of the Main guard, to soldiers of Co. "C" 38th U.S. Infantry.

The Commanding Officer directs that you investigate this matter, and report thereupon to these Hdqrs.

Very Respectfully
Your Obt. Servt.
Chas. G. Penney
2nd Lt. and Adjt. 38th Inf
Bvt. Capt. U.S.A. Post Adjt.

As noted in the margin of the letter, Capt. Meinhold reported verbally that wood had not been loaned.

Some positive attempts at providing a better life for the black soldiers is also evident. The following letter implies that efforts were made to give these soldiers an education.

Head Quarters Fort Craig N.M.
April 1st 1868

To/
Chaplain John K. Shultz
38th U.S. Infantry
Fort Craig N.M.

Sir:

The Commanding Officer directs that you forward to these Hdqrs hereafter weekly reports showing the average number of attendants at the post school for each week from each company.

He further directs that these reports be rendered every Sunday morning and that they be forwarded before eight o'clock A.M.

Your Obt. Servt.
Chas. G. Penney
2nd Lt. and Adjt. 38th Inf
Bvt. Capt. U.S.A. Post Adjt.

RELIANCE ON LOCAL ECONOMY

Several of the material remains recovered are clearly of local origin. Locally obtained tan earthenware jar fragments were found in the trash dump east of the hospital. Dr. Robert McKay, post surgeon for part of

1869, noted in his diary that he used a similar jar to make a water filtering system for the hospital (McKay 1918).

Organic materials such as peach and apricot pits were also recovered. These may have been bought from a local source or from the sutler who obtained them locally. Apricot and peach pits were recovered in the excavations conducted at Paraje, a small town located about 10 miles south of Fort Craig (Boyd 1986).

In addition to the cultural remains, the post returns and official correspondence report the hiring of local people for various jobs at the fort. These include employment as guides, masons, carpenters, herders, and teamsters. Several letters regarding civilian employment are presented below.

Hd. Qrs. Fort Craig N.M.
August 24th 1864

DeForrest, C.H. Bvt Major
A.A.A. Genl. Dist. N.M. Santa Fe N.M.
Third Calif. Qr. M. Dist. N.M.

Sir:

I have the honor to report that during the recent rains the Quarters and the Storehouses of this post were much injured, a portion of the roof of one of the Commisary buildings fell in damaging stores to a considerable extent. All the storehouses leak more or less badly and in several cases the walls are much damaged deeming it necessary for the proper protection of the public stores. I directed the A.A.Q.M. of this post (he having reported himself unable to make the required repairs with the force allowed him) to employ two additional masons and five Mexican laborers for one month to make the more important and pressing repairs absolutely necessary to protect Stores and preserve buildings. I would therefore request the authority of the District Commander for the hiring of these additional employees.

I am Sir
Very Respectfully
Your Obdt. Servt.

Hd. Qrs. Post Fort Craig N.M.
Novbr. 4th 1866

Meinhold Chas. Bvt. Capt.
A.A.Q.M

Captain:

You will employ two "masons" from the 5th until the 10th inst. inclusive for the purpose of laying the floors in the Co. Quarters, they in their present condition being unfit for the occupancy of the troops.

By order of
Col. Wm. R. Gerhart
Natt Wheeler
1st Lieut. Post Adjutant

Hd. Qrs. Post Fort Craig N.M.
November 10th 1866

DeForrest Cyrus H. Bvt. Major
A.D.C. Distr. N. Mexico
Santa Fe, N.M.

Major

I have the honor to report that yesterday (Nov. 9th) I ordered the employment of a guide to accompany a detachment sent out from this post after Indians in violation of orders contained in a circular from the office of the Chief Qr. Mr. Distr. of N.M. which requires that no interpreter, spy or guide be employed without the written orders of the General Commanding.

I would therefore request that the employment of said guide be approved by the General Commanding and that I be authorized in future to have a guide employed, when necessary or to have

one permanently reported at the Post. The latter I would think would be best, saving valuable time, when parties are suddenly order out.

I am Sir very respectfully
Your Obedient servant
Wm. R. Gerhart
Col 125th U.S. CT
Comdg. Post

Local businessmen and farmers were also contracted to furnish supplies to the post. As seen in the following letter, William R. Milligan, who cultivated a farm within the Fort Craig Reserve, offered to sell potatoes to the fort. It is not known if the potatoes were bought.

Hdqrs. Fort Craig N.M.
August 29th 1868

Bvt. Maj. Chas. McClure
Chief Commissary District, New Mexico
Thro. Hdqrs. District New Mexico
Santa Fe, N.M.

Sir:

I would state for your information that Mr. Milligan has for sale and offers to furnish this garrison with potatoes on the following terms—delivered at the post from time to time as needed by troops, well washed etc. at 8 cents per pound. The potatoes are very fine and the troops are in much need of vegetables. This price although much greater perhaps than would be asked further up the country, I think cheaper in the end, as it saves transportation and proposed place of delivery saves to the Government loss heretofore experienced from not bruising etc. I should respectfully recommend that the A.C.S. at this Post be directed to make this purchase for sale to officers, issue to Hospital and to the Troops of the Garrison. The potatoes are nearly mature and excellent for use at this time.

I am Major
Very Respectfully
Your Obt. Servt.
H.C. Corbin
Capt. 38th Inf.
Bvt. Lt. Col.,
Commanding

Not all dealings with local businessmen had favorable results. Note the following letter regarding the supplying of bran to the post.

Head Quarters Fort Craig
N.M. July 5th 1865

To Messrs Boss, Levic & Isaacs
Socorro

Captain Nissen Q.M. at this Post has shown me your note of June 28th referring to bran. Mr. Burgonyon informs me that you have increased the prices to Six Cents per pound. This excessive price cannot be paid. Unless you will dispose of your bran at the usual rates at the mill, you can keep it and I will take this occasion to say that men who are disposed to take advantage of the present pressing wants of the Government are not entitled to future consideration. Your action in this matter differs so widely from such men as General Montoya, Mr. Shaw & others, that I am somewhat surprised.

Respectfully &c.
Edwin A. Rigg
Lt. Col. 1st Vet. Inf. CV Cmdg

EFFECTIVENESS OF THE ARMY'S SHIPPING OF GOODS

Barring floods, attacks on supply trains, and delays at other shipping points, it would appear from the records that every effort was made to get supplies to the frontier forts. Fort Craig served as a minor depot for shipping goods to many of the southern New Mexico forts, which implies that regular shipments were sent there for distribution to other forts.

Fort Craig had its share of problems in shipping supplies to the various forts. The following letters attest to the problems and exasperations of the commanding officer in meeting supply demands from other forts when a major spring flood inundated the Rio Grande Valley in the spring of 1865.

Hd. Qs, Fort Craig N.M.
May 11th 1865

Comdg. Officer
Fort Cummings
N.M.

The following list of Stores, will be sent to you from this Post, as soon as we can get them & the transportation across the river, if we fail to—I will send them down on this side of the River, via Fort Thorn, please send out towards Fort Thorn a detachment of men to look after them & show them the route. P.S. Your stores will go down on this side & will leave this day.

600	pounds Bacon
300	" Ham
2,120	" Flour States
12,500	" " Mexican
1,800	" Beans
50	" Leu Griese (?)
50	" Sugar crushed
40	gallons Vinegar
150	pounds Candles Admt
30	pounds Pepper Blk.
20	gallons Syrup
246	pounds Potatoes, Des.
40	gallons Whiskey-Bourbon
80	gallons Whiskey D.R.

Very Respectfully
Your Obdt. Servt
Richard Hudson
Lieut 1st Vet. Inf. C.V.
Post Adjt

Head Quarters Fort Craig
N.M. June 18/65

Whittock, I.H.
Captain, Comdg.
Fort Selden
N.M.

Captain:

Your communication of the 16th has been received, your request will be complied with as soon as practicable, every wagon that the W.M. at this Post has at his command are away but two. The trains have been going day and night, transporting stores for Fort Cummings, Fort Selden, Las Cruces & Franklin Texas, and Fort McRae. The transportation at Fort Craig has been reduced 25 percent &

ordered to Fort Union. Thus you can see Captain, that although willing, I cannot perform all that is required for the best of reasons.

Captain French is impatient, Fort Bliss and all other Posts, pretty much the same, in addition we have not one pound of forage for our animals, every pound has been sent off to feed the poor in your Valley. I have sent all my Cavalry horses out some twenty miles to graze & not a pound of forage is for issue at the Post.

I have directed the Q.M. to send your A.Q.M. a list of what stores are here for your post and will see that they go forward as fast as transportation can be furnished.

Yours truly
Edwin A. Rigg
Lt Col. 1st Vet. Inf. C.V.
Cmdg.

Hd. Qrs. Fort Craig N.M.
June 18th 1865

French Wm. Captain
1st Vet Inf. C.V.
Comd'g Fort McRae
N.M.

Captain.

Capt. Nissen has referred a communication received this day from Lt. John Slater A.A.Q.M. at Fort McRae, to me. It seems to me that Lt. Slater has evinced some temper in the language used in his request. When Lt. Slater used the words "I shall expect you to deliver by your trains the Quartermaster Stores which you have been instructed to supply to this Post," he evidently had forgotten that Capt. Nissen is the Qr. M. at my Post, & that Captain Nissen was and is subject to my orders, and to none others here.

For your information I enclose copy of Capt. Carey's letter of instructions to Capt. Nissen, dated June 9th 1865. I also respectfully state for your further information that most of the stores enumerated in Capt. Carey's letter are not here to send, the envelopes would take all or nearly all that are here. The Corn cannot be sent for the reason that there is none on hand. Genl. Carleton directed that the corn on hand here should be forwarded to Las Cruces to be issued to the poor, and it has gone. I have had in consequence to send out to a grazing camp, all the Cavalry horses, that they could if possible be kept up on grass. I have had to reduce the forage ration of grain to worse animals to 3-1/2 pounds per day, & now cannot feed that we have none. There is but 2 lbs. of Castile soap on hand. Horse and Mule shoe nails we have but 80 lbs on hand & require 40 lbs per month at this post. Tacks there are none. Neats foot Oil cannot be spared. Axle grease we have on hand 100 pounds, required per month 60 to 70 pounds. Inform Lt. Slater that he could be supplied with as much Bacon grease as he required for that purpose. Rosin on hand 17 pounds all of which and more will be required to build a ferry boat. Horse and mule shoes can be furnished. On hand for reshipment for Cruces since 13th of May 2 wagon loads of stores.— for Fort Selden since June 11th 6 wagon loads. For Fort McRae since June 11th 1 wagon load for San Elizaro Texas since June 11th 2 wagon loads to Capt. Butler Fort Bliss Franklin to one load of Coal to McRae 5 wagon loads lumber to McRae 3 loads, to return stores to Romero 5 loads—to do this we have two wagons or teams at the Post. Twenty-five percent or near that of our transportation having been ordered to be turned over to Fort Union & has gone. The balance is worsing [worsening] day and night & the post is without forage. Hay on hand not over 10 tons. Capt. Whittock Comdg Selden & from Bliss around including Cummings and all impatient for Supplies. It is my desire to accommodate you all but I cannot fabricate transportation or Stores & you must all bide your time. I have written to you this fully that you can understand where the difficulty lies. The river is still too high to be forded & for want of a boat everything is crossed in small boats. I have directed Capt. Nissen to load the wagon sent here from your post with lumber and the whiskey you require not having the forage to send. I will also send your stores forward as rapidly as the means at this Post will permit, and will accommodate you in anything that we have here [that] can be spared.

I am Captain Very Respectfully
Your Obt. Svt.
Edwin A. Rigg
Lt. Col. 1st Vet. Inf. C.V. Comd'g

From the analysis of the artifact assemblage, it appears that there was not much lag time in getting supplies to the fort. The ammunition recovered indicates that the soldiers were equipped with up-to-date bullets, and most of the military insignia and buttons found (except for the two earlier-style uniform buttons) reflect the various changes instituted by the army. The two earlier-style buttons probably reflect curation of an earlier uniform rather than shipping problems.

The lack of evidence of reuse on artifacts further attests that the Army did its best to get materials to the fort. The scrap of a burlap bag used to repair a hole in one of the walls in the soldier's quarters is an example of using materials on hand in order to avoid requisitioning materials from the quartermaster.

ROLE OF THE RAILROAD

The north-south line of the AT&SF railroad and its subsidiary, the New Mexico and Southern Pacific, was completed through the Rio Grande Valley in 1880. The town of San Marcial, located about 6 miles to the north, became a railhead for Fort Craig. When Fort Craig was reactivated in late 1880, the first troops to occupy the fort came by rail (Grinstead 1973). Other fort correspondence indicates that the troops were moved up and down the valley by rail for some of their scouting expeditions, as evidenced by the following letter.

Fort Craig NM
January 10th 1882

To the Post Adjutant
Fort Craig NM

Sir

I have the honor to make the following report regarding a scout made by me in compliance with Order No. 7 from Hdqrs Fort Craig NM.

In accordance with said order I left this post at 2:30 PM Jan 8th with 21 men "F" Company 23rd Infantry and 10 men "M" Company 4th Cavalry, the latter being mounted.

On arriving at San Marcial we were delayed half hour waiting for the extra train being made up for our accommodation. We arrived at Engle 35 miles south at six PM —

Captain J. Haskell
23rd Infantry

His wagon apparently arrived at daylight the next day. One cannot help but wonder just how expeditious using the train was in this instance.

Artifactually, the predominance of post-1880 manufactured bottles over earlier bottles attests to the impact of the railroad for the shipping of goods. Other items, such as the greater variety of canned goods and up-to-date ammunition, also indicate the importance of the railroad. If a greater number of commodities was being shipped via rail, it would stand to reason that the army also used the railroad to ship supplies, which would increase the army's effectiveness in supplying posts with materials.

ENVIRONMENTAL ADAPTATION

The speciation of the wood recovered from the various buildings indicates that most of the specimens were from a local source. Fort Craig operated its own sawmill, located about 25 miles to the northwest. Other

building materials, such as the adobe bricks, the basalt rocks used in the foundations and the guardhouse, and the jaspe, all came from local sources.

The wood and coal used in the fireplaces also came from local sources. Charcoal found in some of the fireplaces was likely from wood gathered in the bosque below the fort, and the coal came from mines in Carthage located about 30 miles to the northeast. From the documentary sources, it appears that the gathering of firewood was a problem, as the men took firewood from private lands near the fort.

February 25th 1865

To the Various Co Commanders
Sir

Complaint having been made to the Colonel Comdg by Mr. Stapleton that wood is being taken from his land by soldiers from this Post, he has directed me to instruct you to order the men belonging to your Companies *at once* to *discontinue this practice.* Each company commander is directed to issue the most *stringent* orders as regards this matter, as the Colonel Comdg will furnish with the utmost severity the first infraction of this order.

I am Sir
Very Respectfully
Your Obt Servant
John Abbott
2nd Lieut 1st Cal. Cav.
Post Adjutant

Apparently the wood problem continued owing to the scarcity of firewood on the reservation. A letter written to the Assistant Inspector General in April 1866 stated that "No wood for use of the Post can be had within this reservation. . . . Mr. Milligan agent for Messrs. Cooke and Shadd has made a verbal complaint to me as commanding officer that soldiers have frequently hauled wood from the opposite side of the river from land and property of Mr. Chavez, now rented by Cooke and Shadd. The nearest point from where wood can be had for use of the Post is eighteen miles." Four months later a directive was sent to the post quartermaster stating that no more wood was to be taken from the opposite side of the river. In October of 1867 a letter was sent to the chief quartermaster of the Department of the Missouri requesting an authorization for a contract to supply the fort with fuel. It was noted that wood could be procured for about $10 a cord. It is not known if the authorization was given.

As noted above, the faunal remains indicate that both the soldiers and officers supplemented their diets with wild game. Deer, ducks, and other game birds were hunted and fish were caught in the Rio Grande.

IMPACT OF VANDALISM

Salvaging of materials from the fort probably began as soon as it was sold in 1894 to the Valverde Land and Cattle Company. Relic hunters have done their fair share of damage to what little remained after Mother Nature and grazing cattle wreaked havoc. Vandals' holes are evident throughout many of the buildings and in the latrine areas outside the fort.

In 1966 Wilson noted in his field inventory of Fort Craig that "Roads, made by driving over the ground, go all through the fort area and, as at Fort Seldon, have caused some damage to structures." A photograph taken of the fort in the 1950s shows a car parked near the new hospital (Figure 28.1). Wilson further states that "there is a certain amount of vandalism going on at the site, as witness the hole in the concrete floor and potholes both inside and outside of structures. However, it doesn't look like things are out of hand."

Seven years later, Grinstead (1973:33) writes that "low hummocks left by the melted adobe walls have made excellent mini roller coasters for trail bikes and motorcycles. Relic-hunters have dug all over the



Figure 28.1. *Car parked near the new hospital ca. late 1950s (courtesy of New Mexico State Records Center and Archives, DOD Collection #35227).*

south plain, making the mere act of walking hazardous. One rear set of officers' quarters was wantonly destroyed several years ago when it was dug well below the level of the floor, and the companion set was only a little less ruined."

Since ownership of the fort was turned over to the Bureau of Land Management, great measures have been taken in site protection. The establishment of permanent caretakers has greatly attributed to the cessation of relic hunting at the fort. Despite the evidence of relic hunting, the excavations have shown that the impact of vandalism, for the most part, has not compromised the integrity of the cultural remains.

PREHISTORIC COMPONENT

As noted in Chapter 3, Fort Craig may have been built on a prehistoric component. Prehistoric materials were noted in a vandal hole in the commanding officer's quarters (Gossett and Gossett 1985) and a prehistoric component was documented at the back of the fort on the edge of the terrace (Gerow 1988). Several lithics and ceramics were recovered from the excavations, but most of them came from the roof/wall fall strata. This suggests that these artifacts were probably in the gravels used for the roofs. Thus, at this point we do not know the extent of the prehistoric occupation under the fort.

RECOMMENDATIONS FOR FUTURE RESEARCH

The excavations conducted at the fort have by no means exhausted the research potential. Many unanswered questions were raised by the work that future excavations and historical research may be able to answer.

At the front gate, further excavation should be done in the south guardhouse to delineate the walls and to explore the remains of the underground cells. Even though these cells were filled in, enough should remain to document the terrible conditions of these features.

More excavations should be done to expose the vertical posts found in the backhoe trench in order to determine their exact function. If they are part of the gate and sallyport superstructure, then we may be able to arrive at a description of these features that is heretofore lacking in the historical records.

Excavation units should also be placed within the north guardhouse and its two adjoining adobe rooms. According to the dimensions of the two rooms depicted on the various plans of the fort, our excavation units should have bisected their walls . The fact that no walls were found raises some questions regarding the accuracy of the plans. Another possibility is that the walls are so eroded that no remnants remain. The excavations should clarify either premise.

In the soldiers' quarters the low wall or bancolike feature found in the west squad room remains puzzling. The 1884 quartermaster report indicated all the original squad rooms to be the same size. The post surgeon noted in 1869 that the men rolled their bedding to the top of their beds and used the bottoms for seating, because benches and chairs were not available. In the 1880s there are several references to barracks chairs, so it would seem that the banco was not intended for seating. Until further work can be done in all the squad rooms, it will not be known if the ledge was a common feature or if it had been added during the civilian occupation. Likewise, further excavations could also determine if this feature was the result of wall fall and not intentional.

Within Room 6, it is clear that a fire destroyed part of the room. When this fire occurred and the full extent of the damage are not known. This fire is not mentioned in the fort's records. Complete excavation of this room may enable us to answer these questions, especially if diagnostic artifacts are recovered in the stratum below the remodeled floor.

The excavations in the bakery identified a complex remodeling history, including reconstruction after a fire. The historical records contain only limited information regarding this bakery, and there is no mention of remodeling as the result of fire or descriptions of the three rooms within this edifice. Further excavations may provide the necessary data to unravel the remodeling episodes and to flesh out the limited information about the bakery provided by the records.

One of the biggest questions still to be answered is the clarification of the upper and lower quarters. As Grinstead points out in Chapter 11, this question might be resolved if excavations could locate a doorway in the center wall in one of the sets of quarters. This could be easily accomplished by simple shovel-scraping to expose the walls. If a doorway is present, it should be visible once the walls are delineated.

We still have no data regarding the economic status of the civilians who worked and lived at the fort. Further archival research is needed to determine the locations of the rooms, followed by excavations to recover the material remains in order to address this question.

Excavations in the offices of the quartermaster, subsistence officer, and cavalry areas would provide more insight into the military workings of the fort. We have a great deal of data on life at the fort via the work in the quarters but very little concerning the military aspect. Likewise, excavations in the sutler's store would enable us to obtain further information regarding economics and shipping of supplies to the fort.

One aspect that is missing is the economic status of the commanding officer versus the other officers. Excavations in the commanding officer's house could supply the necessary data to address this question.

More archival research is definitely needed regarding the buffalo soldiers stationed at Fort Craig. How did their duty at Fort Craig compare to those at other frontier forts? If we could find material remains directly attributed to them, we might be able to evaluate the status of these soldiers.

It would be wonderful to track down letters and diaries of people who were stationed or worked at the fort. These materials would flesh out the picture of what life at the fort was really like, information that is not available in material remains or in official historical records.

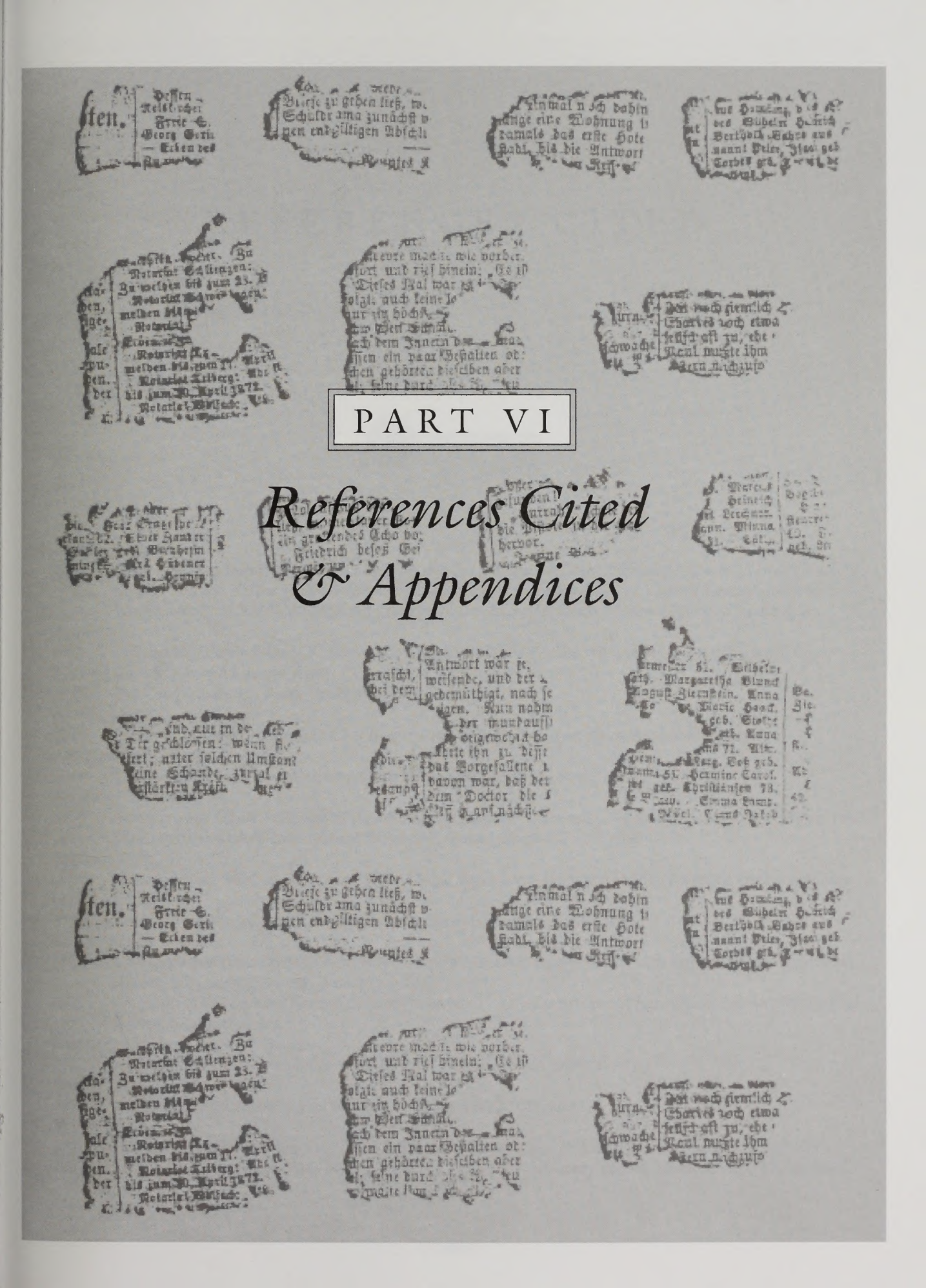
SUMMARY

In summary, the work conducted at Fort Craig during the five sessions indicates that there are still intact deposits within the buildings, and that despite 100+ years of relic hunting, vandalism, and erosion, the archeology is far more complex than previously thought. It has also shown that there is an enthusiasm among the general public for this type of project and a caring and concern for the fragile nature of these historical resources.

These excavations have provided a unique opportunity for professionals and amateurs to work together to preserve our national heritage. They have also aided in the enhancement of the Bureau of Land Management's long-term goals for the fort by providing data for the interpretation programs, as well as laying the groundwork for the visitor management program. The material and data recovered have shed light on the fort's history in relation to national and regional developments, and the project has provided information for the interpretation of this history from the study of both the documentary and archeological records. ✠

NOTE

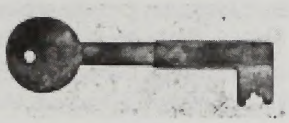
1. All of the letters are from microfilm records entitled "Letters received by Headquarters, District of New Mexico, September 1865–August 1890," which are on file at the Center for Southwest Research, Zimmerman Library, University of New Mexico. These records are part of National Archives Record Group 393, Records of U.S. Army Continental Commands, 1821–1920.



PART VI

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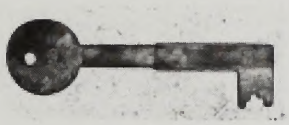
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Appendix 1

TROOPS STATIONED AT FORT CRAIG



Regular Army Troops Stationed at Fort Craig, 1854–1885 (from Agnew 1971)

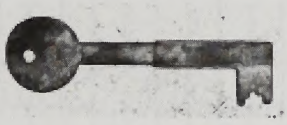
Regiment	Years	Companies
Independent Regiment of Mounted Riflemen*	1856–1861	A, C, D, F, G, I, K
First Dragoons	1854–1856	D
Second Dragoons	1854	E, K
First Cavalry	1861–1862	D, G
Third Cavalry	1861–1862, 1866–1870	B, C, E, G, I, K
Third Infantry	1854–1858	I
Fourth Cavalry	1881–1884	Troops F, M
Fifth Infantry	1861–1862	A, B, C, D, E, F, G, I, K
Sixth Infantry	1884	Troop I
Seventh Infantry	1860–1862	D, F, H, K
Eighth Cavalry	1870–1872	A, H
Ninth Cavalry (C)	1876–1877, 1880–1881	B, D
Fifteenth Infantry	1874–1881	A, B, F, G, K
23rd Infantry	1881–1884	F
38th Infantry (C)	1867–1869	C, D
125th Infantry (C)	1866–1867	A, B, C

* became Third Cavalry in 1861

Note: From mid-1862 until 1866 Fort Craig was garrisoned by the New Mexico and California Volunteers, primarily the latter.

Appendix 2

MONTHLY AGGREGATE OF TROOPS



The following tables were compiled from the Fort Craig Post Returns. These records are on microfilm in the Center for Southwest Research, Zimmerman Library, University of New Mexico, Albuquerque. The title is "Fort Craig, New Mexico, March 1854–June 1885; The National Archives, National Archives and Records Service, General Services Administration, Washington." The series is entitled "Microfilm Publications – National Archives; microcopy no. 617; Returns from U. S. Military Posts, 1800–1916; Rolls 261–262."

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1854	March	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			2nd Dragoons	K	-	33	4	11	48
			3rd Infantry	I	3	54	1	17	75
	April	Chandler	Field & Staff	-	1	-	-	-	1
			2nd Dragoons	K	1	37	3	6	47
			3rd Infantry	I	3	65	1	4	73
	May	Chandler	Field & Staff	-	1	-	-	-	1
			2nd Dragoons	K	1	32	2	7	42
			3rd Infantry	I	2	51	1	16	70
			4th Infantry (temp)	-	1	-	-	-	1
	June	Capt. Wm. Steele, 2nd Dragoons	Field & Staff	-	-	-	1	-	1
			2nd Dragoons	K	1	22	1	16	40
			2nd Dragoons (detached)	E	-	5	3	39	47
			3rd Infantry (detached)	I	1	51	2	9	63
			4th Infantry (temp)	-	1	-	-	-	1
	July	Steele	Field & Staff	-	-	-	1	-	1
			2nd Dragoons	K	1	17	1	19	38
			2nd Dragoons (detached)	E	-	5	3	38	46
			3rd Infantry (detached)	I	1	44	2	15	62
			4th Infantry (temp)	-	1	-	-	-	1
	August	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			3rd Infantry	I	2	52	1	5	60
			1st Dragoons	H	-	20	1	2	22
	September	Chandler	1st Dragoons	D	1	49	2	12	64
			3rd Infantry	I	3	49	1	8	60
			Temp at Post	-	-	3	-	-	3
	October	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	42	3	17	63
			3rd Infantry	I	2	42	1	9	54
			Temp at Post	-	-	1	-	-	1
	November	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	63	3	12	79
			3rd Infantry	I	2	45	1	8	56
			Temp at Post	-	1	-	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1854	December	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	63	3	15	82
			3rd Infantry	I	2	45	1	9	57
			Temp at Post	-	1	-	-	-	1
1855	January	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons (detached)	D	-	15	4	61	80
			3rd Infantry	I	2	52	1	-	55
			Temp at Post	-	1	-	-	-	1
	February	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	-	13	4	63	80
			3rd Infantry	I	2	40	1	11	54
			Temp at Post	-	1	-	-	-	1
	March	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons (detached)	D	-	16	4	60	80
			3rd Infantry	I	2	51	1	1	55
			Temp at Post	-	1	-	-	-	1
	April	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons (detached)	D	-	15	4	61	80
			3rd Infantry	I	2	52	1	-	55
			Temp at Post	-	1	-	-	-	1
	May	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons (detached)	D	-	15	4	60	79
			3rd Infantry	I	2	44	1	8	55
			Temp at Post	-	1	-	-	-	1
	June	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons (detached)	D	-	14	4	61	79
			3rd Infantry	I	2	47	1	2	52
	July	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	-	14	4	61	79
			3rd Infantry	I	2	46	1	2	51
	August	1st Lt. John Adams, 1st Dragoons	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	52	2	18	73
			3rd Infantry	I	1	36	2	9	48
	September	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	61	2	11	76

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1855	September	Chandler	3rd Infantry	I	2	62	1	7	72
	October	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	52	2	21	77
			3rd Infantry	I	3	57	-	12	72
	November	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	74	2	7	85
			3rd Infantry	I	3	68	-	1	72
	December	Chandler	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	65	2	16	85
			3rd Infantry	I	3	63	-	-	66
1856	January	1st Lt. John Adams, 1st Dragoons	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	70	2	9	83
			3rd Infantry	I	2	52	1	9	64
	February	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	68	2	6	78
			3rd Infantry	I	3	71	-	2	76
	March	1st Lt. John Adams, 1st Dragoons	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	31	3	41	76
			3rd Infantry	I	1	28	2	40	71
	April	Adams	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	2	67	2	5	76
			3rd Infantry	I	2	60	1	8	71
	May	2nd Lt. Matthew L. Davis, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	60	2	11	74
			3rd Infantry	I	1	53	2	14	70
	June	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			1st Dragoons	D	1	49	2	22	74
			3rd Infantry	I	2	45	1	20	68
	July	Major Enoch Steen, 1st Dragoons	Field & Staff	-	2	-	-	-	2
			1st Dragoons	D	1	44	2	27	74
			3rd Infantry	I	2	61	1	5	69
			3rd Infantry (temp)	-	-	1	-	-	1
	August	Steen	Field & Staff	-	2	-	-	-	2
			1st Dragoons	D	1	49	2	24	76
			3rd Infantry	I	1	57	2	9	69

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1856	September	Major George B. Crittenden, RMR	Field & Staff	-	2	-	-	-	2
			Mounted Riflemen	F	1	56	1	14	72
			3rd Infantry	I	1	54	2	9	69
			3rd Infantry (temp)	-	-	1	-	-	1
			1st Dragoons (temp)	D	-	2	-	-	2
	October	Crittenden	Field & Staff	-	2	-	-	-	2
			Mounted Riflemen	F	1	59	1	6	67
			3rd Infantry	I	1	65	2	1	69
			Temp at Post	-	-	2	-	-	2
	November	Crittenden	Field & Staff	-	2	-	-	-	2
			Mounted Riflemen	F	1	48	2	14	65
			3rd Infantry	I	1	61	3	1	66
			Temp at Post	-	-	3	-	-	3
	December	Crittenden	Field & Staff	-	2	-	-	-	2
			Mounted Riflemen	F	-	59	3	12	74
			3rd Infantry	I	1	59	3	2	65
			Temp at Post	-	1	3	-	-	4
1857	January	Crittenden	Field & Staff	-	2	-	-	-	2
			Mounted Riflemen	F	-	29	3	40	72
			3rd Infantry	I	-	28	4	30	62
			Temp at Post	-	1	2	-	-	3
	February	Crittenden	Field & Staff	-	2	-	-	-	2
			Mounted Riflemen	F	1	58	2	11	72
			3rd Infantry	I	1	36	3	18	58
			Casually at Post	B	-	2	-	-	2
	March	Crittenden	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F	1	64	2	4	71
			3rd Infantry	I	1	37	3	15	56
			Attached	-	1	1	-	-	2
			Casually at Post	B	2	-	-	-	2
	April	2nd Lt. James Wright, RMR	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F	-	34	3	34	71
			3rd Infantry	I	On detached service, no return				
			3rd Infantry (at Post)	I	-	10	-	2	12

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1857	May	Bvt. Lt. Col. Andrew Porter, USA RMR	Field & Staff	-	-	1	1	-	2
			Mounted Riflemen	F	1	44	2	26	73
			3rd Infantry	I	-	11	3	41	55
			Attached	-	1	-	-	-	1
	June	Porter	Field & Staff	-	-	1	1	-	2
			Mounted Riflemen	F	1	46	2	21	70
			3rd Infantry	I	-	12	3	40	55
			Attached RMR	-	-	2	-	-	2
			Casually at Post		-	4	-	-	4
	July	Porter	Field & Staff	-	-	1	1	-	2
			Mounted Riflemen	F	1	45	2	21	69
			3rd Infantry	I	-	12	3	40	55
			Attached RMR	-	-	-	1	-	1
			Casually at Post, 3rd Infy	B	-	1	-	-	1
	August	1st Lt. Alexander McRae, RMR	Field & Staff	-	-	1	1	-	2
			Mounted Riflemen	F	-	30	3	35	68
			3rd Infantry	I	-	11	3	41	55
			Attached RMR	-	1	-	-	-	1
	September	McRae	Field & Staff	-	1	1	1	-	3
			Mounted Riflemen	F	-	55	3	6	64
			3rd Infantry	I	1	50	2	-	53
			Attached RMR	-	1	-	-	-	1
			1st Dragoons (temp)	D, K	-	3	-	-	3
			Mounted Rifles	B	-	1	-	-	1
			3rd Infantry (temp)	F	1	7	-	-	8
	October	McRae	Field & Staff	-	1	-	1	1	3
			Mounted Riflemen	F	-	49	4	12	65
			3rd Infantry	I	1	49	3	1	54
			Attached RMR	-	1	-	-	-	1
			1st Dragoons (casually)	D, K	-	3	-	-	3
	October	McRae	Mounted Rifles (casually)	C, G	-	9	-	-	9
			3rd Infantry (casually)	F, C	-	2	-	-	2
			8th Infantry	I	-	1	-	-	1
	November	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F	1	52	2	26	82

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1857	November	Chandler	3rd Infantry	I	2	73	2	9	86
			Attached RMR	-	-	1	-	-	1
			1st Dragoons (casually)	-	-	4	-	-	4
			Mounted Rifles (casually)	-	-	4	-	-	4
			3rd Infantry (casually	-	-	5	-	-	5
	December	Chandler	Field & Staff	-	1	1	-	-	2
			Mounted Riflemen	F	-	42	4	36	82
1858	January	Chandler	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	2	79	1	1	83
			Mounted Riflemen	F	1	70	3	2	76
	February	Chandler	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	2	78	1	1	82
			Mounted Riflemen	F	1	70	3	5	79
			RMR (casually at post)	D	-	1	-	-	1
			3rd Infantry (casually)	-	1	-	-	-	1
			8th Infantry (casually)	-	1	-	-	-	1
	March	Chandler	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	2	77	1	1	81
			Mounted Riflemen	F	1	71	3	4	79
			Attached RMR	D	-	1	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
			3rd Infantry (casually)	H	-	3	-	-	3
			1st Dragoons (casually)	K	-	1	-	-	1
	April	Chandler	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	2	77	1	-	80
			Mounted Riflemen	F	1	73	3	1	78
			Attached RMR	D	-	1	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
	May	Lt. Matthew L. Davis, 3rd Infantry	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	1	71	2	6	80
			Mounted Riflemen	F	1	73	3	1	78
			Attached RMR	D	-	1	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
			3rd Infantry (casually)	H	-	1	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1858	June	Capt. Daniel T. Chandler, 3rd Infantry	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	1	54	2	23	80
			Mounted Riflemen	F	1	72	3	-	76
			2nd Dragoons (casually)	A	-	1	-	-	1
			3rd Infantry (casually)	H	-	2	-	-	2
			RMR (casually at post)	C	-	6	-	-	6
	July	Chandler	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	2	68	1	9	80
			Mounted Riflemen	F	-	21	4	50	75
			3rd Infantry (attached)	C	1	42	2	24	75
			2nd Dragoons (casually)	A	-	1	-	-	1
	August	Lt. Matthew L. Davis, 3rd Infantry	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	-	74	3	3	80
			Mounted Riflemen	F	-	20	4	50	74
			3rd Infantry (attached)	F	1	-	-	-	1
			1st Dragoons (casually)	D, G	1	8	-	-	9
			2nd Dragoons	A	-	1	-	-	1
	September	Davis	Field & Staff	-	1	1	-	-	2
			3rd Infantry	I	-	72	3	4	79
			Mounted Riflemen	F	-	16	4	53	73
			3rd Infantry (attached)	F	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
	October	Major J. S. Simonson, RMR	Field & Staff	-	2	1	-	-	3
			3rd Infantry	I	-	37	3	41	81
			Mounted Riflemen	F	-	22	4	50	76
			2nd Dragoons (casually)	A	-	1	-	-	1
	November	Simonson	Field & Staff	-	2	1	-	-	3
			3rd Infantry	I	-	34	3	44	81
			Mounted Riflemen	F	-	21	4	51	76
			2nd Dragoons (casually)	A	-	1	-	-	1
	December	Simonson	Field & Staff	-	2	1	-	-	3
			3rd Infantry	I	-	38	3	40	81
			Mounted Riflemen	F	-	22	4	50	76
			3rd Infantry (attached)	F	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1859	January	Simonson	Field & Staff	-	2	1	-	-	3
			Mounted Riflemen	F, I	2	124	5	28	157
			3rd Infantry (attached)	F	1	-	-	-	1
			3rd Infantry (casually)	F	-	3	-	-	3
			2nd Dragoons (casually)	A	-	1	-	-	1
	February	Bvt. Capt. J. P. Hatch, RMR	Field & Staff	-	1	-	1	1	3
			Mounted Riflemen	F, I	2	138	5	12	157
			3rd Infantry (attached)	F	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
	March	Major J. S. Simonson, RMR	Field & Staff	-	2	1	-	-	3
			Mounted Riflemen	F, I	2	139	5	8	154
			3rd Infantry (attached)	F	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
	April	Simonson	Field & Staff	-	2	1	-	-	3
			Mounted Riflemen	F, I	2	139	5	8	154
			3rd Infantry (attached)	F	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
	May	Bvt. Capt. J. P. Hatch, USA	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	1	127	6	18	152
			3rd Infantry (attached)	F	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
	June	Hatch	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	1	124	6	16	147
			RMR (attached)	E	1	-	-	-	1
			2nd Dragoons (casually)	A	-	1	-	-	1
			RMR (casually at post)	C	-	2	-	-	2
	July	2nd Lt. Herbert M. Enos, RMR	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	1	109	6	30	137
			RMR (attached)	E	1	-	-	-	1
	August	Bvt. Capt. Gordon Granger, RMR	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	1	124	6	16	147
			RMR (attached)	E	1	-	-	-	1
	September	Bvt. Lt. Col. Andrew Porter, USA	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	3	89	3	73	168
			RMR (attached)	E	1	-	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1859	October	Porter	Field & Staff	-	1	-	-	-	1 (sick)
			Mounted Riflemen	F, I	3	95	4	67	169
			RMR (attached)	C	-	1	-	-	1
			8th Infantry (attached)	C	-	1	-	-	1
	November	Porter	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	5	107	2	55	169
	December	Porter	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	6	149	1	11	167
1860	January	Porter	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F, I	6	142	1	15	164
			8th Infantry (casually)	B	-	2	-	-	2
	February	Porter	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F	2	77	1	-	80
			RMR (attached)	I	1	-	-	-	1
			8th Infantry (casually)	B	-	2	-	-	2
			RMR (casually at post)	I	-	2	-	-	2
	March	Porter	Field & Staff	-	1	-	-	-	1
			Mounted Riflemen	F	1	75	2	3	81
			Mounted Riflemen	C	2	65	1	12	80
			Mounted Riflemen	K	2	36	1	36	75
			Mounted Riflemen	A	1	41	2	25	69
			RMR (attached)	I	1	-	-	-	1
			RMR (casually at post)	I	-	1	-	-	1
			8th Infantry (casually)	B	-	2	-	-	2
			3rd Infantry (casually)	K	-	-	1	-	1 (sick)
	April	Capt. John G. Walker, RMR	Field & Staff	-	-	-	1	-	1 (leave)
			Mounted Riflemen	C	1	67	2	9	79
			Mounted Riflemen	K	1	38	2	33	74
			Mounted Riflemen	A	1	40	2	24	67
			RMR (attached)	I	1	-	-	-	1
			RMR (casually at post)	I	-	1	-	-	1
			RMR (casually at post)	F	-	4	-	-	4
	May	2nd Lt. Edward Treacy, RMR	RMR (attached)	I	1	-	-	-	1
			RMR (attached)	A	-	5	-	2	7
			RMR (attached)	G	-	2	-	2	4

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1860	May	Treacy	RMR (attached)	F	-	2	-	-	2
			RMR (attached)	K	-	10	-	3	13
			RMR (casually at post)	K	-	3	-	-	3
	June	Treacy	RMR	A	-	6	-	-	6
			RMR	C	-	4	-	-	4
			RMR	I	1	-	-	-	1
			RMR	K	-	12	-	2	14
	July	Capt. Robert M. Morris, RMR	Field & Staff	-	-	1	-	-	1
			RMR	G	-	53	2	17	73
			RMR (attached)	A	-	1	-	-	1
			RMR (attached)	C	-	2	-	-	2
			RMR (attached)	F	-	1	-	-	1
			RMR (attached)	I	1	-	-	-	1
	August	Bvt. Major R. C. Gatlin, 7th Infantry	Field & Staff	-	1	1	-	-	2
			7th Infantry	D,F,K	3	150	7	18	178
			RMR	G	1	51	2	19	73
			RMR (attached)	A	-	1	-	-	1
			RMR (attached)	C	-	2	-	-	2
			RMR (attached)	F	-	1	-	-	1
			RMR (attached)	I	1	-	-	-	1
			RMR (attached)	K	-	1	-	-	1
	September	2nd Lt. Edward Treacy, RMR	Field & Staff	-	1	1	-	-	2
			7th Infantry	D,F,K	-	45	10	122	177
			RMR	G	1	3	2	67	73
			RMR (attached)	A	-	2	-	-	2
			RMR (attached)	C	-	3	-	-	3
			RMR (attached)	F	-	1	-	-	1
			RMR (attached)	I	1	-	-	-	1
			RMR (attached)	K	-	1	-	-	1
	October	Bvt. Lt. Col. Andrew Porter, RMR	Field & Staff	-	1	1	-	-	2
			7th Infantry	D,F,K	-	67	10	127	204
			RMR	A,G,F	3	125	6	76	210
			1st Dragoons (attached)	Recruits	-	1	-	-	1
			RMR (attached)	B	-	2	-	-	2
			RMR (attached)	C	-	3	-	-	3

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1860	October	Porter	RMR (attached)	F	-	9	-	-	9
			RMR (attached)	I	1	-	-	-	1
			RMR (attached)	K	-	2	-	-	2
	November	Capt. Richard C. Gatlin, 7th Infantry	Field & Staff	-	1	1	-	-	2
			7th Infantry	D,F,K	2	74	8	119	203
			RMR	A,G,F	2	122	8	76	208
			RMR (attached)	B,E,I,K	1	14	-	-	15
			3rd Infantry (temp at post)	B,E,G	-	4	-	-	4
	December	Gatlin	Field & Staff	-	1	1	-	-	2
			7th Infantry	D,F,K	2	95	8	98	203
			RMR	A,G,F	2	119	5	9	135
			RMR (attached)	B,D,E,G,I,K	1	20	-	-	21
			3rd Infantry (attached)	B	-	1	-	-	1
1861	January	Gatlin	7th Infantry	D,F,K	2	95	8	98	203
			RMR	A,F	4	92	3	34	133
			RMR (attached)	C,D,H,I,K	-	7	1	-	8
			3rd Infantry (attached)	B	-	1	-	-	1
			7th Infantry (attached)	C	-	1	-	-	1
	February	Bvt. Lt. Col. Andrew Porter, USA	Field & Staff	-	1	1	-	-	2
			7th Infantry	D,F,K	1	90	9	100	200
			RMR	A,F	2	60	2	1	65
			RMR (attached)	C,D,I,H,K	1	2	-	-	3
			3rd Infantry (attached)	C	-	1	-	-	1
	March	Capt. Robert M. Morris, RMR	Field & Staff	-	1	-	-	1	2
			7th Infantry	D,F,K	1	67	3	8	79
			RMR	A,F	3	95	4	16	118
			RMR (attached)	I,K	1	1	-	-	2
			7th Infantry (attached)	D,G,K	-	6	-	-	6
	April	Morris	Field & Staff	-	1	-	-	1	2
			7th Infantry	F	1	56	3	21	81
			RMR	F,G	1	91	6	18	116
			RMR (attached)	G,I,K	2	1	-	-	3
			7th Infantry (attached)	A,D,G,K	-	4	-	-	4
			8th Infantry (attached)	-	1	-	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1861	May	Morris	Field & Staff	-	1	-	-	1	2
			7th Infantry	A,D,F,K	-	7	-	-	7
			RMR	F,G	1	65	6	34	106
			RMR	G,H,I,K	2	2	-	-	4
	June	Morris	Field & Staff	-	1	-	-	1	2
			7th Infantry (attached)	A,D,F	-	5	-	-	5
			RMR	F,G	1	39	2	12	54
			RMR (attached)	G,H,I,K	1	3	1	-	5
	July	Morris	Field & Staff	-	1	-	-	1	2
			7th Infantry	F	1	61	2	13	77
			RMR	A,G	1	59	4	31	95
			2nd Reg NM Foot Vols	-	3	45	-	-	48
			Attached &Casually	-	1	1	-	-	2
	August	Capt. Henry R. Selden, 5th Infantry	Field & Staff	-	2	2	-	-	4
			5th Infantry	D,F	2	131	4	6	143
			7th Infantry	C,F,K	4	236	4	6	250
			1st Dragoons	D,K	-	129	4	5	138
			RMR	A,C,G,K	4	148	5	129	186
			2nd Reg NM Foot Vols	Cos. of Eaton, Itero, Baca	9	162	-	1	172
			Indep. Co. NM Mtd. Vols	Hubbell's Co	3	63	-	9	75
			7th Infantry (attached)	A,D,G	1	4	-	-	5
			1st Dragoons (attached)	C,F	2	-	-	-	2
			RMR	A,B,H,I	1	40	-	1	42
	September	Selden	Field & Staff	-	6	4	-	-	10
			5th Infantry	D,F	2	127	4	9	142
			7th Infantry	F	1	81	2	1	85
			3rd Cavalry	C,G,K	1	156	3	15	175
			1st Reg. NM Vols	D,E,F,H	10	215	2	18	245
			Mounted Vols	B	1	79	2	3	85
			7th Infantry (attached)	B	-	2	-	-	2
			3rd Cavalry (attached)	B,E,F,H,I	3	17	-	6	26
	October	Selden	Field & Staff	-	3	2	-	-	5
			5th Infantry	D,F	2	136	3	24	165
			7th Infantry	F	1	74	1	8	84

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1861	October	Selden	3rd Cavalry	Field Staff, Band, C,G,H, K	2	156	9	17	184
			2nd Reg NM Vols	D,E,F,H	7	232	4	11	254
			NM Mounted Vols	B	3	43	-	18	64
			7th Infantry (attached)	B	-	2	-	-	2
			3rd Cavalry (attached)	A,B,F	1	7	-	-	8
			6th Cavalry (attached)	-	1	-	-	-	1
			1st Reg NM Vols (attach)	Field & Staff	2	4	-	-	6
	November	Major Thomas Duncan, 3rd Cavalry	Field & Staff	-	4	2	-	-	6
			5th Infantry	Field Staff, Band, B,D,F,I, K	4	374	11	36	425
			7th Infantry	F,H	1	150	2	15	168
			2nd Cavalry	G	-	50	3	4	57
			3rd Cavalry	Field Staff, Band, C,G,H, K	1	59	8	124	192
			3rd Infantry (attached)	Field	1	-	-	-	1
			5th Infantry (attached)	G,H	2	-	-	-	2
			7th Infantry (attached)	C,G,I	-	4	-	-	4
			14th Infantry (attached)	-	2	-	-	-	2
			3rd Cavalry (attached)	A,B,E	1	12	1	-	14
			2nd Reg NM Vols (attach)	Reg Staff	1	-	-	-	1
	December	Duncan	Field & Staff	-	4	2	-	-	6
			5th Infantry	B,F	1	140	3	10	154
			7th Infantry	F,H	1	152	2	13	168
			3rd Cavalry	C	-	59	2	4	65
			Light Battery	McRae's	3	98	4	4	109
			5th Infantry (attached)	Field Staff, Band, D,I,K	5	240	8	15	268
			7th Infantry (attached)	A,D,G,I	-	5	-	-	5
			14th Infantry (attached)	-	-	2	-	-	2
			3rd Cavalry (attached)	Field Staff, Band, G	3	74	5	-	82
			Casually at Post	-	-	18	-	-	18

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1862	January	Missing Returns							
	February	Capt. H.R. Selden, 5th Infantry	Regular Garrison	-	2	112	5	32	151
			Field & Staff	-	4	2	-	-	6
			5th Infantry	Field, Staff, Band, B,D,E,I, K	6	356	14	20	396
		[February 21 – Battle of Valverde] [Col. Edward R.S. Canby]	7th Infantry	C,F,K	1	196	3	26	226
			10th Infantry	A,F,H	2	114	5	32	153
			Colorado Volunteers	A	2	71	1	13	87
			1st Cavalry	D,G	-	75	5	53	133
			2nd NM Volunteers	F	3	75	-	4	82
			3rd NM Volunteers	K	3	43	-	4	50
			4th NM Volunteers	A	3	51	-	1	55
			5th NM Volunteers	B	3	28	-	4	35
			Graydon's Indep. Comp.	-	1	26	2	20	49
			7th Infantry (attached)	D,F,G	1	5	-	-	6
			14th Infantry (attached)	-	2	-	-	-	2
			1st Cavalry (attached)	-	3	-	-	-	3
			McRae's Battery (attach)	-	2	85	3	5	95
			11th Infantry (attached)	-	1	-	-	-	1
			2nd NM Vols. (attached)	B	1	-	-	-	1
	March (1-20)	Selden	Field & Staff	-	4	2	-	-	6
			5th Infantry	Field, Staff, Band, B,D,F,I, K	6	351	14	22	393
			7th Infantry	C,F,H	1	192	3	25	221
			10th Infantry	A,H	1	72	3	21	97
			Colorado Volunteers	A	2	71	1	13	87
			1st Cavalry	D,G	-	75	5	54	134
			2nd NM Volunteers	B	3	80	1	3	87
			3rd NM Volunteeers	K	3	44	-	5	52
			4th NM Volunteers	A	3	62	-	1	66
			5th NM Volunteers	B	2	22	-	7	31
			Graydon's Indep. Co.	-	3	46	-	-	49
			7th Infantry (attached)	D,G,I,K	1	6	-	-	7

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1862	March	Selden	14th Infantry (attached)	-	1	-	-	-	1
			1st Cavalry (attached)	-	1	-	2	-	3
			McRae's Battery (attach)	-	3	124	5	10	142
			10th Infantry (attached)	-	1	-	-	-	1
			2nd NM Vols (attached)	-	1	-	-	-	1
			5th Infantry (attached)	-	3	-	-	-	3
	April	Capt. R.M. Morris, 3rd Cavalry	Field & Staff	-	3	1	-	-	4
			1st Cavalry	D,G	1	61	3	39	104
			3rd Cavalry	Field, Staff, Band, C,D,E, G,K	9	198	14	91	312
			7th Infantry	C,F,H	2	162	3	55	222
			10th Infantry	A,H	-	63	3	27	93
			1st NM Volunteers	A	2	45	-	7	54
			2nd NM Volunteers	E	2	40	1	4	47
			Casually at Post	-	3	-	-	-	3
	April 10-20	Col. Christopher Carson, 1st NM Vols	Field & Staff	-	3	2	-	-	5
			1st NM Volunteers	Field, Staff, Band, A,B,C, E,F,G,H,I	20	475	9	84	588
			2nd NM Volunteers	Field, Staff, D,E	7	116	6	13	142
			4th NM Volunteers	A	3	53	-	1	57
			General Hospital	-	3	135	-	-	138
			Casually at Post, Prisoners	-	3	29	-	-	32
	May	Capt. Henry R. Selden, 5th Infantry	Field & Staff	-	2	2	1	-	5
			5th Infantry	B,D,E,F,G,I,K	9	422	15	78	524
			McRae's Battery	-	2	132	6	78	218
	June	Selden	Field & Staff	-	3	2	1	-	6
			5th Infantry	Field, Staff, NCS, Band, A, B,D,E,F,G,I,K	10	445	16	103	574
			McRae's Battery	-	2	130	6	77	215
			Casually at Post	-	-	7	-	-	7

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1862	July 10 Field Return		Field & Staff	-	2	2	2	-	6
			5th Infantry	A,B,D,E,F,G,I, K	11	447	16	95	569
			McRae's Battery	-	2	158	6	46	212
			Casually at Post	-	1	-	-	-	1
	July 20	1st Lt. Col. Enoch Steen, 2nd Cavalry	Field & Staff	-	6	2	1	-	9
			2nd Colorado Volunteers	A	2	67	1	8	78
			2nd Colorado Volunteers	B	1	66	1	16	84
			Attached	-	-	20	-	-	2
			Casually at Post	-	-	58	-	-	58
	August 10 Tri-Month	Steen	Field & Staff	-	9	-	-	-	9
			2nd Colorado Volunteers	A,B	4	132	1	25	163
			Attached	-	-	7	-	-	7
			Sick in Hospital	-	-	26	-	-	26
	September	Capt. Joseph Updegraff, 5th Infantry	Field & Staff	-	2	2	-	-	4
			Batt. 5th Infantry	A,B,I,K	4	227	8	33	272
			Attached	-	3	10	-	-	13
			Casually at Post	-	-	11	-	-	11
	October	Capt. Samuel Archer, 5th Infantry USA	1st Infantry Cal. Vols	F,I	4	120	2	33	159
			5th Infantry Cal. Vols	B	1	72	2	15	90
			1st Cavalry Cal. Vols	C	3	64	-	16	83
			Attached	-	1	6	-	-	7
			Casually at Post	-	-	2	-	-	2
	November	Archer	1st Infantry Cal. Vols	F,I	4	125	2	26	157
			5th Infantry Cal. Vols	B	2	79	1	7	89
			1st Cavalry Cal. Vols	C	3	62	-	18	83
			Attached	-	1	7	-	-	8
	December	Lt. Col. Edwin A. Rigg, 1st Infy Cal. Vols	Field & Staff	-	2	1	-	-	3
			1st Infantry Cal. Vols	F,I	4	135	1	13	153
			5th Infantry Cal. Vols	B	2	76	-	10	88
			1st Cavalry Cal. Vols	C	2	51	1	29	83
			Attached	-	1	16	-	-	17
1863	January	Rigg	Field & Staff	-	2	2	-	-	4
			1st Infantry Cal. Vols	E,F	3	108	1	39	151
			5th Infantry Cal. Vols	B	2	71	-	15	88

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1863	January	Rigg	Attached	-	-	43	-	-	43
	February	Rigg	Field & Staff	-	3	3	-	-	6
			1st Infantry Cal. Vols	E,F,I,K	9	279	1	16	305
			5th Infantry Cal. Vols	B,G	4	155	2	19	180
			1st Cavalry Cal. Vols	D	1	59	2	19	81
			Attached	-	1	23	-	-	24
	March	Rigg	Field & Staff	-	4	4	-	-	8
			1st Infantry Cal. Vols	E,F,K	8	264	2	30	304
			5th Infantry Cal. Vols	B, G	3	144	1	24	172
			1st Cavalry Cal. Vols	D	1	28	2	50	81
			Attached	-	-	21	-	-	21
	April	Rigg	Field & Staff	-	5	3	-	-	8
			1st Infantry Cal. Vols	F,I,K	4	198	4	15	221
			5th Infantry Cal. Vols	B	3	74	-	9	86
			Attached	-	2	59	-	-	61
	May	Rigg	Field & Staff	-	4	3	-	-	7
			1st Infantry Cal. Vols	E,F,I,K	10	266	2	20	298
			5th Infantry Cal. Vols	B,G	4	157	1	8	170
			Attached	-	-	30	-	-	30
	June	Rigg	Field & Staff	-	5	4	-	-	9
			1st Infantry Cal. Vols	E,F,I,K	10	277	1	6	294
			5th Infantry Cal. Vols	B	3	79	-	5	87
			1st Cavalry Cal. Vols	D	2	53	-	23	78
			Attached	-	2	24	-	-	26
	July	Rigg	Field & Staff	-	5	4	-	-	9
			1st Infantry Cal. Vols	A,E,F	6	218	2	6	232
			5th Infantry Cal. Vols	B	2	74	1	11	88
			1st Cavalry Cal. Vols	D	1	24	2	51	78
			Attached	-	1	21	-	-	22
	August	Rigg	Field & Staff	-	4	4	-	-	8
			1st Infantry Cal. Vols	E,K	4	129	2	8	143
			5th Infantry Cal. Vols	B	3	79	-	6	88
			1st Cavalry Cal. Vols	A	1	30	2	44	77
			Attached	-	-	51	-	-	51

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1863	September	Rigg	Field & Staff	-	4	3	-	-	7
			1st Infantry Cal. Vols	F,K	2	122	3	9	136
			1st Cavalry Cal. Vols	D	1	25	2	47	75
			Attached	-	15	38	-	-	53
	October	Rigg	Field & Staff	-	3	3	-	-	6
			1st Infantry Cal. Vols	E,K	4	135	2	2	143
			1st Cavalry Cal. Vols	D	-	19	3	53	75
			Attached	-	2	17	-	-	19
	November	Rigg	Field & Staff	-	3	3	-	-	6
			1st Infantry Cal. Vols	E,K	4	127	2	10	143
			1st Cavalry Cal. Vols	D	1	26	2	45	74
			Attached	-	2	25	-	-	27
	December	Rigg	Field & Staff	-	4	3	-	-	7
			1st Infantry Cal. Vols	K	2	58	1	6	67
			5th Infantry Cal. Vols	B	3	59	-	26	88
			1st Cavalry Cal. Vols	D	-	7	3	74	84
			Attached	-	2	40	-	-	42
1864	January	Rigg	Field & Staff	-	2	4	2	-	8
			1st Infantry Cal. Vols	E,H	2	71	3	79	155
			5th Infantry Cal. Vols	B	2	60	1	24	87
			1st Cavalry Cal. Vols	D	1	30	2	51	84
			1st Infantry NM Vols	D,F,H	8	263	1	5	277
			Attached	-	2	22	-	-	24
	February	Rigg	Field & Staff	-	2	4	2	-	8
			1st Infantry Cal. Vols	F,H	4	125	2	25	156
			1st Cavalry Cal, Vols	D	1	32	2	50	85
			1st Infantry NM Vols	D,F,H	7	247	2	9	265
			Attached	-	3	26	-	-	29
	March	Rigg	Field & Staff	-	2	3	2	1	8
			1st Infantry Cal. Vols	H	2	75	1	1	79
			1st Cavalry Cal. Vols	B,D	2	70	4	75	151
			1st Infantry NM Vols	D,F,H	5	238	4	25	272
			Attached	-	5	26	-	-	31
	April	Maj. C.E. Bennett, 1st Cavalry Cal. Vols	Field & Staff	-	1	4	4	-	9
			1st Infantry NM Vols	D,F	5	151	1	22	179

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1864	April	Bennett	1st Infantry Cal. Vols	H	2	70	1	13	86
			1st Cavalry Cal. Vols	K	3	93	-	6	102
			Attached	-	6	44	-	-	50
	May	Bennett	Field & Staff	-	5	4	6	3	18
			1st Infantry NM Vols	D,F	4	134	1	48	187
			1st Cavalry Cal. Vols	K	3	81	-	18	102
			Attached	-	5	67	-	-	72
	June	Col. Oscar M. Brown, 1st Cavalry C.V.	Field & Staff	-	4	4	7	3	18
			1st Infantry NM Vols	D,F	4	132	1	50	187
			1st Cavalry Cal. Vols	K	3	92	-	6	101
			Attached	-	5	82	-	-	87
	July	Lt. Col. C.E. Bennett, 1st Cavalry C.V.	Field & Staff	-	2	4	9	3	18
			1st Infantry Cal. Vols	B	2	44	-	11	57
			1st Cavalry Cal. Vols	H	2	48	-	35	85
			1st Infantry NM Vols	D,E,F	5	176	2	58	241
			Attached	-	3	11	1	-	15
	August	Col. Edwin A. Rigg, 1st Infantry C.V.	Field & Staff 1st InftyCV	-	1	3	3	1	8
			Field & Staff 1st Cav CV	-	5	4	6	2	17
			1st Infantry Cal. Vols	B,C	5	116	-	4	125
			1st Cavalry Cal. Vols	H	2	50	-	33	85
			1st Infantry NM Vols	E,F	4	137	-	23	164
			Attached	-	4	8	-	-	12
			Casually at Post	-	-	4	-	-	4
	September	Rigg	Field & Staff 1st InftyCV	-	1	-	-	-	1
			Field & Staff 1st Cav CV	-	5	2	6	2	15
			1st Infantry Cal. Vols	Detachment	-	29	-	3	32
			1st Cavalry Cal. Vols	H	1	60	1	23	85
			1st Infantry NM Vols	E,F	6	129	-	32	167
			Attached	-	2	8	-	-	10
			Casually at Post	-	1	3	-	-	4
	October	Lt. Col. C.E. Bennett, 1st Cavalry C.V.	1st Infantry Cal. Vols	B	1	32	-	28	61
			1st Cavalry Cal. Vols	Field, Staff, H	2	21	10	62	95
			1st Infantry NM Vols	E	2	47	1	40	90
			Attached	-	3	6	-	1	10
			Casually at Post	-	-	6	-	-	6

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1864	November	Col. Oscar M. Brown, 1st Cavalry C.V.	1st Infantry Cal. Vols	B	1	23	1	29	54
			1st Cavalry Cal. Vols	Field, Staff, F	5	58	8	51	90
			1st Infantry NM Vols	E	3	80	-	10	93
			Attached	-	2	6	-	1	9
			Casually at Post	-	1	7	-	-	8
	December	Brown	1st Infantry Cal. Vols	B	1	21	1	31	54
			1st Cavalry Cal. Vols	Field, Staff, H	4	47	9	31	91
			1st Infantry NM Vols	E	2	79	1	16	98
			Attached	-	2	11	-	-	13
1865	January	Brown	1st Infantry Cal. Vols	B	1	29	1	24	55
			1st Cavalry Cal. Vols	H	3	58	7	22	90
			1st Infantry NM Vols	E	3	91	-	10	104
			Attached	-	3	11	-	-	14
	February	Brown	Field & Staff	-	2	4	5	3	14
			1st Cal. Vet. Infantry Vols	B	1	32	1	21	55
			1st Cavalry Cal. Vols	F,H	4	118	2	38	162
			1st Infantry NM Vols	D,E	5	173	1	14	193
			Attached	-	5	11	-	-	16
			Casually at Post	-	-	6	-	-	6
	March	Lt. Col. Edwin A. Rigg, 1st Cal. Vet. Infty	Field & Staff	-	1	-	-	-	1
			1st Cal. Vet. Infantry Vols	B	2	56	-	26	84
			1st Cavalry Cal. Vols	F,H	2	64	1	8	75
			Attached	-	3	10	-	-	13
			Casually at Post	-	1	3	-	-	4
	April	Rigg	Field & Staff	-	1	-	2	-	3
			1st Cal. Vet. Infantry Vols	B,E	3	118	2	38	161
			1st Cavalry Cal. Vols	H	-	36	3	32	71
			Attached	-	4	15	-	-	19
	May	Rigg	Field & Staff	-	1	-	1	-	2
			1st Cal. Vet. Infantry Vols	B,E	2	110	3	46	161
			1st Cavalry Cal. Vols	H	1	55	2	18	76
			Attached	-	4	4	-	-	8
			Casually at Post	-	-	1	-	-	1
	June	Capt. Thomas P. Chapman, 1st Vet. Inf. C.V.	Field & Staff	-	-	-	2	-	2

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1865	June	Chapman	1st Cal. Vet. Infantry Vols	B,E	2	110	3	46	161
			1st Cavalry Cal. Vols	H	1	55	2	18	76
			Attached	-	4	4	-	-	8
			Casually at Post	-	-	1	-	-	1
	July	Lt. Col. Edwin Rigg, 1st Vet. Infty C.V.	Field & Staff	-	1	-	1	-	2
			1st Cal. Vet. Infantry Vols	B,E	2	110	3	46	161
			1st Cavalry Cal. Vols	H	1	55	2	18	76
			Attached	-	4	4	-	-	8
			Casually at Post	-	-	1	-	-	1
	August	Rigg	Field & Staff	-	1	-	1	-	2
			1st Cal. Vet. Infantry Vols	B,E	3	137	2	15	157
			1st Cavalry Cal. Vols	H	2	69	1	14	86
			Attached	-	4	12	-	-	16
			Casually at Post	-	1	1	-	-	2
	September	Capt. Thom. P. Chapman, 1st Vet Inf. CV	Field & Staff	-	-	-	2	-	2
			1st Cal. Vet. Infantry Vols	B,E	2	129	3	22	156
			1st Cavalry Cal. Vols	H	1	58	2	24	85
			Attached	-	5	12	-	-	17
	October	Col. Francisco Abreu, 1st Infty NM Vols	Field & Staff	-	2	1	4	2	9
			1st Vet. Infantry C.V.	B,E	3	134	2	17	156
			1st Infantry NM Vols	G	2	59	-	15	76
			1st Cavalry C.V.	H	2	63	1	16	82
			Attached	-	3	10	-	-	13
			Casually at Post	-	-	1	-	-	1
	November	Abreu	Field & Staff	-	2	2	4	-	8
			1st Vet. Infantry C.V.	B,C,E	4	151	4	79	238
			1st Infantry NM Vols	G	2	28	-	45	75
			1st Cavalry C.V.	H	2	46	1	27	76
			Attached	-	2	10	-	-	12
			Casually at Post	-	-	6	-	-	6
	December	Abreu	Field & Staff	-	2	2	4	-	8
			1st Vet. Infantry C.V.	B,E	3	107	2	42	154
			1st Infantry NM Vols	G	2	62	-	12	76
			1st Cavalry C.V.	H	1	27	2	49	79
			Attached	-	2	13	-	-	15

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1866	January	Abreu	Field & Staff USA	-	-	2	-	-	2
			1st NM Vols Field & Staff	-	2	2	4	-	8
			1st Vet. Infantry C.V.	B,E	3	113	2	29	147
			1st Infantry NM Vols	G	2	46	-	27	75
			1st Cavalry C.V.	H	2	44	1	32	79
			Attached	-	2	6	-	-	8
	February	Abreu	Field & Staff USA	-	-	2	-	-	2
			1st NM Vols Field & Staff	-	2	2	4	-	8
			1st Vet. Infantry C.V.	B,E	2	94	2	48	146
			1st Infantry NM Vols	G	1	64	1	9	75
			1st Cavalry C.V.	H	3	62	-	9	74
			Attached	-	2	10	-	-	12
	March	Abreu	Field & Staff USA	-	-	2	-	-	2
			1st NM Vols Field & Staff	-	2	2	4	-	8
			1st Vet. Infantry C.V.	B,E	2	89	2	48	141
			1st Infantry NM Vols	G	1	51	1	21	74
			1st Cavalry C.V.	H	2	30	1	37	70
			Attached	-	1	4	-	-	5
	April	Abreu	Field & Staff USA	-	-	2	-	-	2
			1st NM Vols Field & Staff	-	2	1	4	2	9
			1st Infantry NM Vols	G	2	65	-	6	73
			1st Cavalry C.V.	H	3	49	-	18	70
			Attached	-	1	11	-	-	12
	May	Abreu	Field & Staff USA	-	-	1	-	1	2
			1st NM Vols Field & Staff	-	2	3	4	-	9
			1st Infantry NM Vols	G	2	61	-	10	73
			1st Cavalry C.V.	H	2	45	1	18	66
			Attached	-	1	11	-	-	12
			Casually at Post	-	-	1	-	-	1
	June	Abreu	Field & Staff USA	-	-	2	-	-	2
			1st NM Vols Field & Staff	-	2	3	4	-	9
			1st Infantry NM Vols	C,G	4	121	-	18	143
			1st Cavalry C.V.	H	1	21	2	41	65
			Attached	-	-	8	1	2	11

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1866	July	Abreu	Field & Staff USA	-	-	2	-	-	2
			1st NM Vols Field & Staff	-	3	3	3	-	9
			1st Infantry NM Vols	C,G	4	102	-	37	143
			1st Cavalry C.V.	H	1	25	2	36	64
			Attached	-	1	8	-	-	9
			Casually at Post	-	4	7	-	-	11
	August	Lt. Col. Edward Willis, 1st NM Infty Vols	Field & Staff USA	-	-	1	-	1	2
			1st Infantry NM Vols	C,G	6	89	3	53	151
			1st Cavalry C.V.	H	2	49	1	11	63
			Attached	-	1	5	-	-	6
			Casually at Post	-	-	8	-	-	8
	September	Col. Wm. Gerhart, 125th US CT	Field & Staff USA	-	-	2	-	-	2
			US 3rd Cavalry	B	2	62	1	22	87
			125th US Colored Infantry	A	2	42	1	18	63
			Field & Staff US 125th CT	-	1	-	-	-	1
			Attached	-	2	3	-	-	5
	October	Gerhart	Staff USA	-	-	2	-	-	2
			US 3rd Cavalry	B	1	55	2	27	85
			125th US Colored Infantry	A,B	5	91	2	39	137
			Attached	-	1	3	-	-	4
			Casually at Post	-	-	8	-	-	8
	November	Gerhart	Staff USA	-	1	2	-	-	3
			US 3rd Cavalry	B	1	62	2	19	84
			125th US Colored Infantry	A,B	4	90	2	39	135
			Attached	-	1	4	-	1	6
	December	Gerhart	Staff USA	-	-	2	-	-	2
			US 3rd Cavalry	B	2	75	1	11	89
			125th US Colored Infantry	A,B	2	82	2	39	125
			Field & Staff US 125th CT	-	3	2	1	-	6
			Attached	-	1	3	-	-	4
1867	Returns for January through September are missing								
	October	Bvt. Maj. Gen. C. Grover, 38th Infantry	Staff USA	-	1	2	-	1	4
			38th Infty. Field & Staff	-	4	4	2	-	10
			3rd US Cavalry	B	1	60	2	5	68
			38th US Infantry	C	1	60	2	44	107

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1867	October	Grover	Attached & Casual	-	-	13	-	-	13
	November	Grover	Staff USA	-	1	2	-	-	3
			38th Infty. Field & Staff	-	4	2	2	-	8
			3rd US Cavalry	B	3	51	-	5	59
			38th US Infantry	C	1	74	2	33	110
			Attached & Casual	-	-	53	-	2	55
	December	Grover	Staff USA	-	1	2	-	-	3
			38th Infty. Field & Staff	-	4	2	2	-	8
			3rd US Cavalry	B	2	57	1	4	64
			38th US Infantry	C	1	88	2	16	107
			Attached & Casual	-	-	26	-	-	26
1868	January	Grover	Staff USA	-	1	2	-	-	3
			38th Infty. Field & Staff	-	4	1	2	-	7
			3rd US Cavalry	B	2	44	1	10	57
			38th US Infantry	C	1	94	2	12	109
			Attached	-	-	48	-	-	48
	February	Capt. Charles Meinhold, 3rd US Cavalry	Staff USA	-	1	2	-	-	3
			38th Infty. Field & Staff	-	3	1	3	-	7
			3rd US Cavalry	B	2	41	1	12	56
			38th US Infantry	C	1	89	2	17	109
			Attached	-	-	44	-	-	44
	March	Bvt. Lt. Col. H.C. Corbin, 38th Infantry	Staff USA	-	1	2	-	-	3
			38th Infty. Field & Staff	-	3	-	3	1	7
			3rd US Cavalry	B	3	52	-	2	57
			38th US Infantry	C	3	85	-	17	105
			Attached	-	-	44	-	-	44
	April	Bvt. Maj. Gen. Wm. B. Hazen, 38th Infantry	Staff USA	-	1	2	-	-	3
			38th Infty. Field & Staff	-	4	1	2	-	7
			3rd US Cavalry	B	2	32	1	22	57
			38th US Infantry	C	2	82	1	19	104
			38th Infantry (attached)	B,D,F,I,K	-	40	-	4	44
			Casually at Post	-	-	6	-	-	6
	May	Bvt. Lt. Col. H.C. Corbin, 38th Infantry	Staff USA	-	-	2	-	-	2
			38th Infty. Field & Staff	-	3	2	3	-	8
			3rd US Cavalry	B	2	51	1	2	56

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1868	May	Corbin	38th Infantry (attached)	B,D,F,I	-	37	-	5	42
	June	Bvt. Maj. Gen. Wm. B. Hazen, 38th Infantry	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	5	78	4	17	104
			3rd US Cavalry	B	1	42	2	3	48
			38th Infantry (attached)	-	-	40	-	2	42
	July	Bvt. Lt. Col. H.C. Corbin, 38th Infantry	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	5	78	4	17	104
			3rd US Cavalry	B	1	28	2	6	37
			38th Infantry (attached)	B,F,I	1	35	-	6	42
	August	Corbin	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	6	79	3	14	102
			3rd US Cavalry	B	3	73	-	2	78
			38th Infantry (attached)	B,F,I	1	35	-	5	41
	September	Bvt. Maj. Gen. C. Grover, 38th Infantry	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	7	79	2	15	103
			3rd US Cavalry	B	1	38	1	34	74
			38th Infantry (attached)	-	-	30	1	10	41
			Casually at Post	-	-	4	-	-	4
	October	Grover	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	6	85	3	7	101
			3rd US Cavalry	B	3	54	-	11	68
			38th Infantry (attached)	-	1	39	1	-	41
	November	Grover	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	7	80	3	10	100
			3rd US Cavalry	B	3	60	0	4	67
			38th Infantry (attached)	-	1	33	-	4	38
	December	Grover	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	6	83	3	7	99
			3rd US Cavalry	B	3	60	-	6	69
			38th Infantry (attached)	-	2	33	-	4	39
1869	January	Grover	Staff USA	-	-	2	-	-	2
			38th US Infantry	Field, Staff, C	7	79	2	15	103
			3rd US Cavalry	B	1	38	1	34	74
			38th Infantry (attached)	-	-	30	1	10	41

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1869	February	Grover	Staff USA	-	-	2	-	-	2
			38th Infantry	Field, Staff, C	6	73	3	22	104
			3rd US Cavalry	B	2	64	1	5	72
			38th Infantry (attached)	-	2	34	-	2	38
	March	Grover	Staff USA	-	-	2	-	-	2
			38th Infantry	Field, Staff, D	6	86	3	7	102
			3rd US Cavalry	B	3	66	-	3	72
			38th Infantry (attached)	G,I	1	38	-	-	39
	April	Grover	Staff USA	-	-	2	-	-	2
			38th Infantry	Field, Staff, H	6	60	3	31	100
			3rd Cavalry	E	1	24	1	12	38
			38th Infantry (attached)	-	-	24	1	11	36
			37th Infantry (attached)	-	1	4	-	-	5
	May	Grover	Field & Staff USA	-	1	2	-	-	3
			38th US Infantry	Field, Staff, A	4	72	2	19	97
			3rd US Cavalry	E	-	24	2	11	37
			38th Infantry (attached)	-	1	27	-	8	36
			3rd Cavalry (attached)	-	1	-	-	-	1
			Casually at Post	-	1	4	-	-	5
	June	Grover	Staff USA	-	-	2	-	-	2
			38th US Infantry	Hd Qrs, D	4	83	1	8	96
			3rd US Cavalry	E	-	23	2	8	33
			Attached	-	3	33	-	2	38
			Casually at Post	-	-	5	-	-	5
	July	Bvt. Maj. Gen. A.V. Kautz, 15th Infantry	Staff USA	-	-	2	-	-	2
			38th US Infantry	Hd Qrs, D	1	66	1	21	89
			3rd US Cavalry	E	-	28	2	25	55
			15th Infty, 3rd Cav (attach)	-	3	24	-	9	36
			Casually at Post	-	-	4	-	-	4
	August	Kautz	Staff USA	-	-	2	-	-	2
			38th US Infantry	D	1	82	1	4	88
			3rd US Cavalry	E	-	49	3	3	55
			15th Infty, 3rd Cav (attach)	-	3	29	-	1	33
			Casually at Post	-	-	1	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1869	September	Kautz	Staff USA	-	-	2	-	-	2
			38th US Infantry	D	1	81	1	3	86
			3rd US Cavalry	E	2	45	1	7	55
			15th Infty, 3rd Cav	B	2	29	1	1	33
			Casually at Post	-	-	1	-	-	1
	October	Bvt. Brig Gen. O.L. Shepherd, 15th Infantry	Staff USA	-	-	2	-	-	2
			15th Infantry	Field & Staff	3	3	2	1	9
			15th Infantry	K	2	64	-	12	78
			3rd Cavalry	E	2	50	1	4	57
			Attach Reg. Band, Clerks	-	-	15	-	-	15
			Casually at Post	-	-	3	-	-	3
	November	Bvt Maj. F.W. Coleman, 15th Infantry	Staff USA	-	1	2	-	-	3
			15th Infantry	Field & Staff	1	3	4	1	9
			15th Infantry	K	2	44	-	16	62
			3rd Cavalry	E	2	39	1	13	55
			Attached	-	-	4	-	-	14
			Casually at Post	-	-	3	-	-	3
	December	Coleman	Staff USA	-	-	2	-	-	2
			15th Infantry	Field & Staff	-	3	5	1	9
			15th Infantry	K	2	52	-	4	58
			3rd Cavalry	E	2	45	1	16	64
			15th Infantry Band, Clerks (attached)	-	-	10	-	1	11
			Casually at Post	-	2	4	-	-	6
1870	January	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	Field & Staff	1	3	4	1	9
			15th Infantry	K	2	48	-	8	58
			3rd Cavalry	E	1	60	2	12	75
			Attached	-	-	13	-	-	13
			Casually at Post	-	-	2	-	-	2
	February	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	Field & Staff	1	4	4	-	9
			15th Infantry	K	2	46	-	10	58
			Attach Reg. Band, Clerks	-	-	13	-	-	13

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1870	March	Bvt. Maj. Murray Davis, 8th Cavalry	General Staff USA	-	-	2	-	-	2
			15th Infantry	Field & Staff	1	4	4	-	9
			15th Infantry	K	2	52	-	4	58
			8th Cavalry	A	2	48	1	15	66
			Attached	-	-	12	-	-	12
			Casually at Post	-	-	1	-	-	1
	April	Davis	General Staff USA	-	-	2	-	-	2
			15th Infantry	Field & Staff	1	4	4	-	9
			15th Infantry	K	1	44	1	12	58
			8th Cavalry	A	2	51	1	11	65
			Attached	-	-	12	-	-	12
			Casually at Post	-	-	2	-	-	2
	May	Bvt. Maj. F.E. Coleman, 15th Infantry	General Staff USA	-	-	2	-	-	2
			15th Infantry	F & S, Band	1	16	4	-	21
			15th Infantry	K	2	50	-	4	56
			8th Cavalry	A	1	36	1	17	55
			Attached	-	1	1	-	-	2
			Casually at Post	-	-	2	-	-	2
	June	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	F & S, Band	1	16	4	-	21
			15th Infantry	K	2	55	-	3	60
			8th Cavalry	A	1	42	1	8	52
			Attached	-	2	1	-	-	3
			Casually at Post	-	-	84	-	-	84
	July	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	F & S, Band	1	15	4	2	22
			15th Infantry	K	2	46	-	12	60
			8th Cavalry	A	1	40	-	8	49
			Attached	-	1	1	-	-	2
			Casually at Post	-	1	3	-	-	4
			Unassigned	-	-	1	-	-	1
	August	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	F & S, Band	1	17	4	-	22
			15th Infantry	K	2	59	-	8	69
			8th Cavalry	A	2	41	1	8	52

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1870	August	Coleman	Attached	-	-	1	-	-	1
			Casually at Post	-	1	1	-	-	2
	September	Coleman	General Staff USA	-	1	2	-	-	3
			15th Infantry	F & S, Band	2	17	3	-	22
			15th Infantry	K	2	75	-	3	80
			8th Cavalry	A	1	63	2	21	87
			Attached	-	-	1	-	-	1
			Casually at Post	-	1	1	-	-	2
	October	Coleman	General Staff USA	-	1	2	-	-	3
			15th Infantry	F & S, Band	2	16	3	1	22
			15th Infantry	K	2	71	-	19	92
			8th Cavalry	A	1	61	2	31	93
			Attached	-	-	1	-	-	1
			Casually at Post	-	-	1	-	-	1
	November	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	F & S, Band	2	16	3	1	22
			15th Infantry	K	2	55	-	11	68
			8th Cavalry	A	2	75	1	15	92
			Attached	-	-	1	-	-	1
			Casually at Post	-	-	4	-	-	4
	December	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	F & S, Band	2	16	2	-	20
			15th Infantry	K	2	63	-	4	69
			8th Cavalry	A	2	81	1	10	94
			Attached	-	-	1	-	-	1
			Casually at Post	-	-	4	-	-	4
1871	January	Capt. Almond B. Willis, 8th Cavalry	General Staff USA	-	-	2	1	-	3
			15th Infantry	F & S, Band	2	16	3	-	21
			15th Infantry	K	-	55	2	12	69
			8th Cavalry	A	1	78	2	10	91
			Attached	-	-	1	-	-	1
			Casually at Post	-	-	3	-	-	3
	February	Capt. F. W. Coleman, 15th Infantry	General Staff USA	-	-	2	1	-	3
			15th Infantry	F & S, Band	3	14	2	-	19
			15th Infantry	K	2	60	-	4	66

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1871	February	Coleman	8th Cavalry	A	3	78	-	7	88
			15th Infantry (attached)	C	-	1	-	-	1
			Casually at Post	-	8	41	-	-	49
	March	Coleman	General Staff USA	-	-	1	2	-	3
			15th Infantry	F & S, Band	2	14	3	-	19
			15th Infantry	K	2	59	-	6	67
			8th Cavalry	A	2	77	1	8	88
			Attached	-	-	1	-	-	1
			Casually at Post	-	1	3	-	-	4
	April	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	K	2	55	-	10	67
			8th Cavalry	A	3	73	-	9	85
			Attached	-	-	1	-	-	1
	May	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	K	2	50	-	12	64
			8th Cavalry	A	2	61	1	15	79
	June	Coleman	General Staff USA	-	-	2	-	-	2
			15th Infantry	K	2	52	-	11	65
			Casually at Post	-	1	26	-	-	27
	July	1st Lt. M.P. Buffum, 15th Infantry	General Staff USA	-	-	2	-	-	2
			15th Infantry	K	1	50	1	9	61
			Casually at Post	-	-	7	-	-	7
	August	Buffum	General Staff USA	-	-	3	-	-	3
			15th Infantry	K	1	36	2	22	61
			Casually at Post	-	-	6	-	1	7
	September	Buffum	General Staff USA	-	-	3	-	-	3
			15th Infantry	K	1	34	2	23	60
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	1	-	-	1
	October	Capt. James H. Stewart, 15th Infantry	General Staff USA	-	-	2	-	1	3
			15th Infantry	H	3	36	-	8	47
			Casually at Post	-	1	11	-	-	12
	November	Stewart	General Staff USA	-	-	3	-	-	3
			15th Infantry	H, K	5	76	1	16	98
			Casually at Post	-	-	1	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1871	December	Stewart	General Staff USA	-	-	3	-	-	3
			15th Infantry	H, K	4	67	2	24	97
1872	January	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H, K	5	79	1	7	92
			8th Cavalry	H	2	42	1	4	49
	February	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H, K	5	72	1	12	90
			8th Cavalry	H	2	43	1	2	48
	March	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H, K	5	71	1	6	83
			8th Cavalry	H	2	35	1	7	45
			Casually at Post	-	-	2	-	-	2
	April	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	2	30	1	5	38
			Casually at Post	-	3	20	-	-	23
	May	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	2	32	1	2	37
			Casually at Post	-	3	14	-	-	17
	June	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	2	45	1	6	54
			Casually at Post	-	3	13	-	-	16
	July	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	2	42	1	8	53
			Casually at Post	-	1	21	-	-	22
	August	1st Lt. James B. Engle, 15th Infantry	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	45	2	5	53
			Casually at Post	-	-	4	-	-	4
	September	Engle	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	47	2	6	56
			Casually at Post	-	-	1	-	-	1
	October	Capt. James H. Stewart, 15th Infantry	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	3	47	-	6	56
			Casually at Post	-	2	3	-	-	5
	November	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	B, H	2	95	3	9	110

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1872	November	Stewart	Casually at Post	-	-	1	-	-	1
	December	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	B, H	4	92	2	10	108
			Casually at Post	-	-	1	-	-	1
1873	January	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	B, H	1	63	5	43	112
			Casually at Post	-	-	2	-	-	2
	February	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	B, H	2	71	4	34	111
	March	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	B, H	2	82	3	24	111
			Casually at Post	-	2	-	-	-	2
	April	Stewart	General Staff USA	-	-	2	-	-	2
			15th Infantry	B, H	3	78	2	26	109
			Casually at Post	-	-	3	-	-	3
	May	Stewart	General Staff USA	-	-	1	-	-	1
			15th Infantry	B, H	1	36	4	62	103
			Casually at Post	-	-	4	-	-	4
	June	Stewart	General Staff USA	-	-	1	-	-	1
			15th Infantry	B, H	2	44	3	53	102
			Casually at Post	-	-	7	-	-	7
	July	Stewart	General Staff USA	-	-	1	-	-	1
			15th Infantry	B, H	2	52	3	44	101
	August	Stewart	General Staff USA	-	-	1	-	-	1
			15th Infantry	B, H	1	36	4	62	103
			Casually at Post	-	-	4	-	-	4
	September	Stewart	General Staff USA	-	-	3	-	-	3
			15th Infantry	H	2	31	1	18	52
			Casually at Post	-	-	5	-	-	5
	October	1st Lt. James B. Engle, 15th Infantry	General Staff USA	-	-	2	-	1	3
			15th Infantry	H	1	28	2	20	51
			Casually at Post	-	1	3	-	-	4
	November	Capt. James Stewart, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	H	2	25	1	34	62
			Casually at Post	-	-	2	-	-	2

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1873	December	Stewart	General Staff USA	-	-	3	-	-	3
			15th Infantry	H	2	42	1	18	63
			Casually at Post	-	-	10	-	-	10
1874	January	Capt. E. W. Whittemore, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	F, H	2	34	1	24	63
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	5	-	-	5
	February	Whittemore	General Staff USA	-	-	3	-	-	3
			15th Infantry	F	3	44	-	14	61
			Casually at Post	-	-	10	-	-	10
	March	Whittemore	General Staff USA	-	-	3	-	-	3
			15th Infantry	F	3	42	-	15	60
			Casually at Post	-	-	4	-	-	4
	April	Whittemore	General Staff USA	-	-	3	-	-	3
			15th Infantry	F	3	49	-	8	60
			Casually at Post	-	-	8	-	-	8
	May	Whittemore	General Staff USA	-	-	2	-	1	3
			15th Infantry	F	3	44	-	12	59
			Casually at Post	-	-	4	-	-	4
	June	Whittemore	General Staff USA	-	-	2	-	1	3
			15th Infantry	F	3	47	-	9	59
			Casually at Post	-	-	7	-	-	7
	July	Whittemore	General Staff USA	-	-	2	-	1	3
			15th Infantry	F	3	47	-	10	60
			Casually at Post	-	-	3	-	-	3
	August	Whittemore	General Staff USA	-	-	2	-	1	3
			15th Infantry	F	3	43	-	12	58
			Casually at Post	-	-	3	-	-	3
	September	Whittemore	General Staff USA	-	-	2	-	1	3
			15th Infantry	F	2	43	1	12	58
			Casually at Post	-	-	2	-	-	2
	October	Whittemore	General Staff USA	-	-	3	-	-	3
			15th Infantry	F	2	44	1	10	57
			Casually at Post	-	-	2	-	-	2

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1874	December	Whittemore	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	39	1	11	53
			15th Infantry	F	2	41	1	12	56
			15th Infantry	K	-	-	3	51	54
			Attached	-	1	-	-	-	1
			Casually at Post	-	1	2	-	-	3
1875	January	Capt. George Shorkley, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	33	1	16	52
			15th Infantry	F	1	37	2	15	55
			15th Infantry	K	-	-	3	51	54
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	2	-	-	2
	February	Capt. E. W. Whittemore	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	32	1	15	50
			15th Infantry	F	3	39	-	12	54
			15th Infantry	K	-	-	3	51	54
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	4	-	-	4
	March	Capt. George Shorkley, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	37	1	8	48
			15th Infantry	F	3	36	-	13	52
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	2	-	-	2
	April	Shorkley	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	37	1	7	47
			15th Infantry	F	3	31	1	13	47
			Casually at Post	-	1	24	-	-	25
	May	Shorkley	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	37	1	7	47
			15th Infantry	F	3	31	1	13	47
			Casually at Post	-	1	24	-	-	25
	June	1st Lt. J. W. Bean	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	1	29	1	9	40
			15th Infantry	F	2	27	1	12	47
			Casually at Post	-	-	4	-	-	4

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1875	July	Bean	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	1	30	1	8	40
			15th Infantry	F	2	23	1	14	40
			Casually at Post	-	-	4	-	-	4
	August	2nd Lt. George Kinzie, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	-	18	2	11	31
			15th Infantry	F	1	14	2	20	37
			Casually at Post	-	-	4	-	4	25
	September	1st Lt. J. W. Bean, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	1	20	1	6	28
			15th Infantry	F	2	23	1	7	33
			Casually at Post	-	-	4	-	-	4
	October	Capt. George Shorkley, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	15	-	10	27
			15th Infantry	F	2	17	1	13	33
			Casually at Post	-	3	3	-	-	7
	November	1st Lt. J. W. Bean, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	1	18	1	18	38
			15th Infantry	F	1	23	2	20	46
			Casually at Post	-	1	32	-	-	33
	December	Capt. George Shorkley, 15th Infantry	General Staff USA	-	1	3	-	-	4
			15th Infantry	B	2	15	1	21	39
			15th Infantry	F	1	20	2	21	44
			Casually at Post	-	1	36	-	-	37
1876	January	Shorkley	General Staff USA	-	1	3	-	-	4
			15th Infantry	B	2	20	1	17	40
			15th Infantry	F	-	25	3	15	43
			Casually at Post	-	3	42	-	-	45
	February	Shorkley	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	34	1	19	56
			15th Infantry	F	-	34	3	17	54
			Casually at Post	-	-	2	-	-	2
	March	Shorkley	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	37	1	16	56
			Casually at Post	-	2	41	-	-	43

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1875	April	1st Lt. John W. Bean, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	2	37	1	16	56
			Casually at Post	-	2	41	-	-	43
	May	Capt. George Shorkley, 1st Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	3	39	9	14	56
			Casually at Post	-	-	6	-	-	6
	June	Shorkley	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	3	38	-	16	56
			Casually at Post	-	-	2	-	-	2
	July	Shorkley	General Staff USA	-	-	3	-	-	3
			15th Infantry	B	3	39	-	14	56
			Casually at Post	-	-	2	-	-	2
	August	1st Lt. John W. Bean, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry (attached)	B	1	14	-	1	16
			Casually at Post	-	-	2	-	-	2
	September	Capt. J. B. Engle, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry (attached)	B	1	2	-	-	3
			15th Infantry	H	2	42	1	6	51
			Casually at Post	-	-	2	-	-	2
	October	Capt. Charles Steelehammer, 15th Infantry	General Staff USA	-	-	3	-	-	3
			15th Infantry	G	1	20	2	23	46
			15th Infantry	A	2	33	1	14	50
			9th Cavalry	B	2	39	-	12	53
			Casually at Post	-	-	2	-	-	2
	November	Steelehammer	General Staff USA	-	-	3	-	-	3
			15th Infantry	G	1	26	2	16	45
			15th Infantry	A	2	31	1	15	49
			9th Cavalry	B	1	22	1	29	53
			Casually at Post	-	-	2	-	-	2
	December	Steelehammer	General Staff USA	-	-	3	-	-	3
			15th Infantry	G	1	27	2	15	45
			15th Infantry	A	2	34	1	11	48
			9th Cavalry	B	2	45	-	6	53
			Attached	-	-	6	-	-	6
			Casually at Post	-	-	1	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1877	January	Steelehammer	General Staff USA	-	-	4	-	-	4
			15th Infantry	G	2	35	1	7	45
			15th Infantry	A	2	33	1	12	48
			9th Cavalry	B	2	45	-	-	47
			Attached	-	-	6	-	-	6
			Casually at Post	-	-	1	-	-	1
	February	Steelehammer	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	2	33	1	9	45
			15th Infantry	A	2	33	1	11	47
			9th Cavalry	B	2	40	-	6	48
			Attached	-	-	6	-	-	6
			Casually at Post	-	1	2	-	-	3
	March	Capt. J. B. engle, 15th Infantry	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	28	2	14	45
			15th Infantry	A	2	26	1	17	46
			9th Cavalry	B	2	39	-	8	49
			Attached	-	-	7	-	-	7
			Casually at Post	-	-	4	-	-	4
	April	Engle	General Staff USA	-	1	4	-	-	5
			15th Infantry	G	2	21	1	18	42
			15th Infantry	A	1	15	2	26	42
			9th Cavalry	B	-	10	2	37	49
			Attached	-	-	-	-	6	6
			Casually at Post	-	-	4	-	-	4
	May	Capt. A. H. Hooker, 9th Cavalry	General Staff USA	-	-	3	1	-	4
			15th Infantry	G	2	27	3	11	41
			15th Infantry	A	-	25	3	15	43
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	13	-	-	13
	June	2nd Lt. Theodore Smith, 15th Infantry	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	20	2	11	34
			15th Infantry	A	2	19	1	12	34
			Casually at Post	-	-	2	-	-	2
	July	Capt. Charles Steelhammer, 15th Infantry	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	2	22	1	11	34

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1877	July	Steelehammer	15th Infantry	A	2	19	1	11	33
			Casually at Post	-	-	1	-	-	1
	August	Steelehammer	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	20	2	11	34
			15th Infantry	A	2	19	1	12	34
			Casually at Post	-	-	2	-	-	2
	September	Steelehammer	General Staff USA	-	1	2	-	1	4
			15th Infantry	G	2	19	1	12	33
			15th Infantry	A	1	13	3	17	34
			Casually at Post	-	-	3	-	-	3
			9th Cavalry	D	1	21	-	-	22
			15th Infantry (detached)	F, G	-	10	-	-	10
	October	Steelehammer	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	24	1	8	34
			15th Infantry	A	2	14	2	16	34
			Attached	-	1	-	-	-	1
			Casually at Post	-	-	2	-	-	2
	November	Capt. Harry Humphreys, 15th Infantry	General Staff USA	-	1	3	-	1	5
			15th Infantry	G	-	19	2	13	34
			15th Infantry	A	2	12	2	18	34
			Attached	-	1	-	1	-	2
			Casually at Post	-	-	3	-	-	3
	December	Capt. Charles Steelehammer, 15th Infantry	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	16	1	17	35
			15th Infantry	A	2	4	2	25	33
			Attached	-	2	-	-	-	2
			Casually at Post	-	1	8	-	-	9
1878	January	Maj. N. W. Osborne, 15th Infantry	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	25	1	7	34
			15th Infantry	A	1	21	2	10	34
			Attached	-	2	-	-	-	2
			Casually at Post	-	4	12	-	-	16
	February	Osborne	General Staff USA	-	1	3	-	-	4
			15th Infantry	G	1	25	1	10	37
			15th Infantry	A	2	22	1	14	39

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1878	February	Osborne	Attached	-	2	-	-	-	2
			Casually at Post	-	-	3	-	-	3
	March	Capt. Charles Steelhammer, 15th Infantry	General Staff USA	-	-	3	1	-	4
			15th Infantry	A	2	17	1	17	37
			15th Infantry	G	1	17	1	15	34
			Attached	-	-	-	2	-	2
	April	Major N. W. Osborne, 15th Infantry	General Staff USA	-	1	2	-	-	3
			15th Infantry	A	1	12	2	22	37
			15th Infantry	G	1	18	1	16	36
			Attached	-	1	-	1	-	2
			Casually at Post	-	-	1	-	-	1
	May	Osborne	General Staff USA	-	1	3	-	-	4
			15th Infantry	A	2	18	1	16	37
			15th Infantry	G	1	18	1	16	36
			Attached	-	2	-	-	-	2
	June	Osborne	General Staff USA	-	-	3	-	-	3
			15th Infantry	A	2	18	1	16	37
			15th Infantry	G	-	18	2	15	35
			Attached	-	2	-	-	-	2
			Casually at Post	-	-	2	-	-	2
	July	Osborne	General Staff USA	-	-	3	-	-	3
			15th Infantry	A	2	15	1	19	37
			Attached	-	2	-	-	-	2
			Casually at Post	-	4	12	-	-	16
	August	Osborne	General Staff USA	-	-	3	-	-	3
			15th Infantry	A	2	26	1	8	37
			Attached	-	2	10	-	-	12
			Casually at Post	-	-	6	-	-	6
"Above recorded losses being accomplished, Fort Craig has ceased to be a military post" A small detachment stayed until April 1879 to guard the public buildings. The post reopened in July 1880									
1878	September	No return filed							
	October	No return filed							
	November	1st Lt. Theodore Smith, 15th Infantry	15th Infantry (attached)	G	1	7	-	-	8
			Casually at Post	-	-	2	-	-	2

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1878	December	Smith	15th Infantry (attached)	G	1	7	-	-	8
			Casually at Post	-	2	-	-	-	2
1879	January	1st Lt. Cyrus W. DeLany, 15th Infantry	15th Infantry (attached)	G, H	1	8	-	-	9
	February	1st Lt. D. H. Clark, 15th Infantry	15th Infantry (attached)	H	1	7	-	-	8
	March	No return filed							
	April	Clark	15th Infantry detachment	H	-	6	-	1	7
			Attached	C	1	-	-	-	1
Fort Craig Closed									
1880	July	Capt. J. W. Bean, 15th Infantry	15th Infantry	H	1	11	21	38	52
			Casually at Post	-	-	9	-	-	9
	August	Bean	General Staff USA	-	-	1	-	-	1
			15th Infantry	H	1	16	2	32	51
			Casually at Post	-	-	10	-	-	10
	September	Bean	General Staff USA	-	-	1	-	-	1
			15th Infantry	H	1	18	2	30	51
			Casually at Post	-	2	61	-	-	63
	October	Bean	General Staff USA	-	-	1	-	-	1
			15th Infantry	H	2	21	1	24	48
			Casually at Post	-	3	37	-	-	40
	November	1st Lt. Cyrus DeLany, 15th Infantry	General Staff USA	-	-	1	-	-	1
			15th Infantry	H	2	27	1	16	46
			Casually at Post	-	-	17	-	-	17
	December	Capt. J. W. Bean, 15th Infantry	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	3	30	-	11	44
			9th Cavalry	D	1	48	2	14	65
			Casually at Post	-	5	32	-	-	37
1881	January	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	3	22	-	18	43
			9th Cavalry	D	1	40	2	21	64
			Attached	-	1	6	-	19	26
			Casually at Post	-	8	58	-	-	66
	February	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	3	34	-	6	43
			9th Cavalry	D	1	50	2	12	65
			Casually at Post	-	-	1	-	-	1

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1881	March	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	37	2	4	44
			9th Cavalry	D	-	23	3	40	66
			Attached	-	1	-	1	-	2
			Casually at Post	-	1	4	-	-	5
	April	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	37	2	4	44
			9th Cavalry	D	-	23	3	40	66
			Attached	-	-	-	2	-	2
			Casually at Post	-	-	2	-	-	2
	May	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	35	2	5	43
			9th Cavalry	D	-	20	3	40	63
			Attached	-	1	-	1	-	2
			Casually at Post	-	-	2	-	-	2
	June	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	31	2	10	44
			9th Cavalry	D	-	19	3	40	62
			Attached	-	1	-	1	-	2
	July	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	23	2	17	43
			9th Cavalry	D	-	19	3	40	62
			Attached	-	2	-	1	-	3
			Casually at Post	-	-	3	-	-	3
	August	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	33	2	6	42
			9th Cavalry	D	-	21	3	38	62
			Attached	-	1	-	1	-	2
			Casually at Post	-	1	36	-	-	37
	September	Bean	General Staff USA	-	-	2	-	-	2
			15th Infantry	H	1	29	2	9	41
			9th Cavalry	D	-	20	3	40	60
			Attached	-	2	-	-	-	2
			Casually at Post	-	1	1	-	-	2

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1881	October	Capt. J. T. Haskell, 23rd Infantry	General Staff USA	-	-	2	-	-	2
			23rd Infantry	F	2	26	1	2	31
			15th Infantry	H	-	1	-	1	2
			9th Cavalry	D	1	58	2	2	63
			Attached	-	2	1	-	-	3
			Casually at Post	-	-	4	-	-	4
	November	Haskell	General Staff USA	-	1	2	-	-	3
			23rd Infantry	F	2	17	1	10	30
			4th Cavalry	M	3	31	-	3	37
			9th Cavalry	D	1	48	2	9	60
			Casually at Post	-	-	9	-	-	9
	December	Major Henry Noyes, 4th Cavalry	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	-	6	3	49	58
			4th Cavalry	M	2	47	1	7	57
			23rd Infantry	F	2	26	1	5	34
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	-	-	-	1	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			9th Cavalry (casually)	D	-	1	-	-	1
1882	January	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E, M	2	66	4	43	115
			23rd Infantry	F	2	47	1	3	53
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Casually at Post	-	-	7	-	-	7
	February	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E, M	2	54	3	57	117
			23rd Infantry	F	2	41	1	10	54
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
	March	Noyes	General Staff USA	-	2	1	-	-	3
			4th Cavalry	E	1	5	2	49	57
			4th Cavalry	M	2	41	1	1	45

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1882	March	Noyes	23rd Infantry	F	2	43	1	4	50
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
	April	Noyes	General Staff USA	-	1	1	-	-	2
			4th Cavalry	E	-	2	3	51	56
			4th Cavalry	M	-	2	3	36	41
			23rd Infantry	F	2	40	-	6	48
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			4th Cavalry (casually)	B	-	2	-	-	2
	May	Noyes	General Staff USA	-	1	1	-	-	2
			4th Cavalry	E	-	1	3	41	45
			4th Cavalry	M	2	33	1	1	37
			23rd Infantry	F	2	35	1	6	44
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Indian Scouts (attached)	B	-	3	-	-	3
			4th Cavalry (casually)	B	-	2	-	-	2
			13th Infantry (casually)	C	-	1	-	-	1
			15th Infantry (casually)	H	-	1	-	-	1
	June	Noyes	General Staff USA	-	1	1	-	-	2
			4th Cavalry	E	-	-	3	55	58
			4th Cavalry	M	2	39	1	2	44
			23rd Infantry	F	2	35	1	5	43
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Indian Scouts (attached)	B	-	3	-	-	3
			4th Cavalry (casually)	B	-	2	-	-	2
			15th Infantry (casually)	H	-	1	-	-	1
	July	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	2	52	1	2	57

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1882	July	Noyes	4th Cavalry	M	3	32	-	4	39
			23rd Infantry	F	1	32	2	6	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			Indian Scouts (attached)	B	-	6	-	-	6
			4th Cavalry (attached)	G	-	1	-	-	1
	August	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	-	-	3	52	55
			4th Cavalry	M	2	35	1	2	40
			23rd Infantry	F	2	37	1	3	43
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			Indian Scouts (attached)	B	-	3	-	-	3
	September	Noyes	General Staff USA	-	1	2	-	-	2
			4th Cavalry	E	-	7	3	44	54
			4th Cavalry	M	2	35	1	1	39
			23rd Infantry	F	2	35	1	3	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
	October	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	2	52	1	2	57
			4th Cavalry	M	3	32	-	4	39
			23rd Infantry	F	1	32	2	6	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Indian Scouts (attached)	B	-	6	-	-	6
			4th Cavalry (attached)	G	-	1	-	-	1
	November	Noyes	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	2	53	1	2	58
			4th Cavalry	M	3	42	-	-	45
			23rd Infantry	F	2	34	1	4	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			Indian Scouts (attached)	B	-	6	-	-	6

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1882	March	Noyes	23rd Infantry	F	2	43	1	4	50
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
	April	Noyes	General Staff USA	-	1	1	-	-	2
			4th Cavalry	E	-	2	3	51	56
			4th Cavalry	M	-	2	3	36	41
			23rd Infantry	F	2	40	-	6	48
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			4th Cavalry (casually)	B	-	2	-	-	2
	May	Noyes	General Staff USA	-	1	1	-	-	2
			4th Cavalry	E	-	1	3	41	45
			4th Cavalry	M	2	33	1	1	37
			23rd Infantry	F	2	35	1	6	44
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Indian Scouts (attached)	B	-	3	-	-	3
			4th Cavalry (casually)	B	-	2	-	-	2
			13th Infantry (casually)	C	-	1	-	-	1
			15th Infantry (casually)	H	-	1	-	-	1
	June	Noyes	General Staff USA	-	1	1	-	-	2
			4th Cavalry	E	-	-	3	55	58
			4th Cavalry	M	2	39	1	2	44
			23rd Infantry	F	2	35	1	5	43
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Indian Scouts (attached)	B	-	3	-	-	3
			4th Cavalry (casually)	B	-	2	-	-	2
			15th Infantry (casually)	H	-	1	-	-	1
	July	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	2	52	1	2	57

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1882	July	Noyes	4th Cavalry	M	3	32	-	4	39
			23rd Infantry	F	1	32	2	6	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			Indian Scouts (attached)	B	-	6	-	-	6
			4th Cavalry (attached)	G	-	1	-	-	1
	August	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	-	-	3	52	55
			4th Cavalry	M	2	35	1	2	40
			23rd Infantry	F	2	37	1	3	43
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			Indian Scouts (attached)	B	-	3	-	-	3
	September	Noyes	General Staff USA	-	1	2	-	-	2
			4th Cavalry	E	-	7	3	44	54
			4th Cavalry	M	2	35	1	1	39
			23rd Infantry	F	2	35	1	3	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
	October	Noyes	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	2	52	1	2	57
			4th Cavalry	M	3	32	-	4	39
			23rd Infantry	F	1	32	2	6	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	C	-	1	-	-	1
			Indian Scouts (attached)	B	-	6	-	-	6
			4th Cavalry (attached)	G	-	1	-	-	1
	November	Noyes	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	2	53	1	2	58
			4th Cavalry	M	3	42	-	-	45
			23rd Infantry	F	2	34	1	4	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			Indian Scouts (attached)	B	-	6	-	-	6

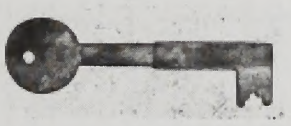
Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1882	November	Noyes	4th Cavalry (attached)	G	-	1	-	-	1
	December	Lt. Col. H. M. Lazelle, 23rd Infantry	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	1	45	2	4	52
			4th Cavalry	M	2	40	1	2	45
			23rd Infantry	F	2	38	1	1	42
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			13th Infantry (attached)	K	1	-	-	-	1
			23rd Infantry (attached)	Field, Staff, E	2	-	-	-	2
			Indian Scouts (attached)	B	-	6	-	-	6
			4th Cavalry (attached)	F	-	1	-	-	1
1883	January	Lazelle	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	1	49	2	3	55
			4th Cavalry	M	2	45	1	2	50
			23rd Infantry	F	2	28	1	10	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	6	-	-	7
	February	Lazelle	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	1	46	2	4	53
			4th Cavalry	M	2	47	1	-	50
			23rd Infantry	F	2	37	1	1	41
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
			Indian Scouts	B	-	6	-	-	6
	March	Lazelle	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	-	6	3	48	57
			4th Cavalry	M	-	6	3	42	51
			23rd Infantry	F	3	35	-	3	41
			4th Cavalry (attached)	Field & Staff	-	-	1	-	1
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
	April	Lazelle	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	-	2	3	53	58
			4th Cavalry	M	-	4	3	49	56

Year	Month	Commanding Officer	Troops	Company	Present		Absent		Aggregate
					Com.	NC	Com.	NC	
1883	April	Lazelle	23rd Infantry	F	2	43	1	1	47
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
	May	Lazelle	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	-	1	3	54	58
			4th Cavalry	M	-	3	3	50	56
			23rd Infantry	F	3	41	-	2	46
			4th Cavalry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
	June	Lazelle	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	-	1	3	54	58
			4th Cavalry	M	-	3	3	50	56
			23rd Infantry	F	3	40	-	2	45
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
			Signal Corps (attached)	-	-	1	-	-	1
	July	Lazelle	General Staff USA	-	1	2	-	-	3
			4th Cavalry	E	-	1	3	54	58
			4th Cavalry	M	-	1	3	52	56
			23rd Infantry	F	3	48	-	1	52
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
			13th Infantry (attached)	E	-	1	-	-	1
			Signal Corps (attached)	-	-	1	-	-	1
	August	Lazelle	General Staff USA	-	-	2	1	-	3
			4th Cavalry	E	-	1	3	48	52
			4th Cavalry	M	-	1	3	37	41
			23rd Infantry	F	2	46	1	2	51
			23rd Infantry (attached)	Field & Staff	1	-	-	-	1
			23rd Infantry (attached)	E	1	-	-	-	1
			13th Infantry (attached)	E	-	1	-	-	1
			Signal Corps (attached)	-	-	1	-	-	1

Appendix 3

QUARTERLY RETURN OF QUARTERMASTER'S STORES

Quarter Ending 31 March 1858



"Quarterly Return of Quartermaster's Stores received and issued at Fort Craig, N.M., in the quarter ending on the 31st of March, 1858, by M. L. Davis, 3rd Infantry, A.A.Q.M. U.S.Army"

I certify, on honor, that the following returns exhibits a true and correct state of all the property which has come into my hands on account of the Quartermaster's Department, during the quarter ending on the 31st of March 1858.

M.L. Davis
Lt. 3rd Infry
A.A.Q.M.

Source: Records of the Office of the Quartermaster General, Record Group 92, National Archives and Records Service, Washington, D.C. Xeroxed copies of portions of the record group are on file at the Bureau of Land Management, Socorro Field Office.

Classes			Forage			Stationary												
Date 1858	Abstracts		Corn	Hay	Fodder	Letter Paper	Cap Paper	Folio Post Paper	Envelope Paper	Envelopes	Wafers	Sealing Wax	Office Tape	Ink Powder	Memorandum Bk	Blank Book	Quills	Black Sand	Steel Pens
			Pounds	Pounds	Pounds	Qrs	Qrs	Qrs	Qrs	Qrs	Ns	Oz	Pcs	Pps	Ns	Ns	Ns	Pps	Doz
Jan. 1		On Hand	152350 1/3	323146	17736	24	23 ½	38	7 ½	470	8	17	21	7	17	7	125	4	23
Mar. 31	Abstract D	Rec'd by Purchase	213010	"	11527														
Mar. 31	Abstract E	Rec'd from officers																	
Mar. 31	Abstract N	Taken up found																	
Totals to be accounted for			365360 1/3	323146	29263	24	23 ½	38	7 ½	470	8	17	21	7	17	7	125	4	23
Mar. 31	Abstract G	Forage	181272	191086	20398														
Mar. 31	Abstract I	Stationary				19	10	"	3 13/24	40	2	10	6	4			65	1	1 ½
Mar. 31	Abstract L	Expended, sold																	
Mar. 31	Abstract M	Transferred																	
Total issued & expended			181272	191086	20398	19	10	"	3 13/24	40	2	10	6	4	"	"	65	1	1 ½
Total remaining on hand			184088 1/3	132060	8865	5	13 ½	38	3 23/24	430	6	7	15	3	17	7	60	3	21 ½
Condition 1	In good order		184088 1/3	132060	8865	5	13 ½	38	3 23/24	430	6	7	15	3	17	7	60	3	21 ½
Condition 2	Unfit for service, repairable																		
Condition 3	Totally unfit for service																		

Stationary Cont.						Office Furniture						Means of Transportation including Harness																	
Pen Holders		Lead Pencils		Letter Stamps		Ink Stands		Sand Boxes		Letter Case		Office Chair		Iron Safe		Wooden Safe		Desk Locks		Tar Buckets		Ox Bows		King Bolts		JR Boys		Wagon Bows		Wagon Covers		5th Chains		Bearing Chains		Stretcher Chains	
Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns	
24		6		1		4		4		1		6		1		1		1		10		72		17		105		56		27		26		16		21	
																														3		3		3			
24		6		1		4		4		1		6		1		1		1		10		72		17		105		56		27		26		16		21	
2		1																																			
2		1																																			
22		5		1		4		4		1		6		1		1		1		10		72		17		105		56		27		26		16		21	
22		5		1		4		4		1				1		1		1		10		60		14		99		36		20		21		12		21	
												6																									
																						12		3		6		20		7		5		4			

Means of Transportation including Harness

Breast Chains	Halter Chains	Assort Chains	Log Chains	Wagons	Wheel Harness	Lead Harness	Horse Harness	Lead Lines	" " Double	Mules	Mules Cond.	Picket Pins	Horses	Horses Cond.	Horses Cond. Mexican	Jockey Sticks	Jack Straps	Neck Straps
Ns	Ns	Ns	Ns	Ns	Single Set	Single Set	Single Set	Ns	Ns	Ns	Ns	Ns	Ns	Ns	Ns	Ns	Ns	Ns
29	99	46	10	2	12	20	4	8	1	46	10	67	3	4	2	2	5	53
	11			3	6	12				18								18
29	110	46	10	5	18	32	4	8	1	64	10	67	3	4	2	2	5	71
29	110	46	10	5	18	32	4	8	1	64	10		3	4	2	2	5	71
29	110	46	10	5	18	16		8	1	38			3			2	5	41
						16	4			14								
										12	10			4	2			30

Means of Transportation including Harness

Pack Saddles		Pack Saddles Incomplete		Skiff		Double Trees		Wagons Condition		Wagon Whips		Ox Yokes		Flat Boat		Cart		Saddle Blankets		Water Buckets		Ambulances		Halters & Straps		Water Kegs		Halter Straps		Mule Collars		Halters		Wagon Tongues		Singles Trees	
Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns		Ns	
22		37		1		10		6		12		18		1		1		14		20		1		18		4		7		1		5		4		2	
																		1										7		1					
22		37		1		10		6		12		18		1		1		14		20		1		18				7		1		5		4		2	
22		37		1		10		6		12		18		1		1		15		20		1		18		4		7		1		5		4		2	
22						8				6		11		1				7		12		1		12		3		4		1		5		4		2	
		37		1						3		2				1												3									
						2		6		3		5						8		8				6		1		20		7		5		4			

Building Materials																Veterinary Tools		
Glass	Glass		Brads	Butt Hinges	Knob Locks	Lumber	Plate Locks	Upright Locks	Horizontal Locks	Door Latches	Cut Nails	Wrought Nails	Putty	Lime	Prepared Plaster of Paris	Locks Asstr.	Alcohol	Ammonia	Aloes
Boxes	Feet	Papers	Ns	Ns	Ns	Feet	Ns	Ns	Ns	Ns	Lbs	Lbs	Lbs	Bus	Bus	Ns	Gal	Gal	Lbs
6	760	23	160	10			28	1	1	20	574	121	4	170		12	3	19	12
						1588									220				
6	760	23	160	10		1588	28	1	1	20	574	121	4	170	220	120	3	19	12
	80	2				1588					188 ½			90	220		1 ¼		
	80	2				1588					188 ½			90	220		1 ¼		
6	680	21	160	10			28	1	1	20	455 ½	121	4	80		12	1 ¾	19	12
4	680	21	160	10			28	1	1	20	455 ½	121	4	80		12	1 ¾	19	12
2																			

Veterinary Tools etc.															Blacksmith's		
Blue Vitriol	Calomel	Castile Soap	Phleme	Laudanum	Merc. Ointment	Opodeldoc	British Oil	Sulphur	Nitro	Sponge	Glauber Salts	Turpentine	Lancet	Horse Syringe	Anvil	Anvils	B.S. Bellows	Dies
Lbs	Lbs	Lbs	Ns	Bot	Lbs	Bot	Bot	Lbs	Lbs	Lbs	Lbs	Bot	No	No	No	No	No	No
2 ½	10	23	1	4	4 ½	54	5	6	10	1	15 ½	12	2	1	1	2	3	1
2 ½	10	23	1	4	4 ½	54	5	6	10	1	15 ½	12	2	1	1	2	3	1
		4 ½					1	2				1						
2 ½	10	18 ½	1	4	4 ½	54	4	4	10	1	15 ½	11	2	1	1	2	3	1
2 ½	10	18 ½		4	4 ½	54	4	4	10	1	15 ½	11	1	1		2	2	1
													1					
			1												1		1	

Blacksmith's																		
Fuller	Shoeing Hammer	Hand Hammers	Sledge "	Paring Knives	B.S. Rasps	Pincers	Screw Plate & Tap	Pritchell	Stocks & Dies	Plate Screws	B.S. Tongs	Shoeing Tools	Taps	Tap Wrenches	Heading Tools	B.S. Aprons	Vices	Hand Vices
No	No	No	No	No	No	No	No	No	No	No	No	Sets	No	No	Sets	No	No	No
1	1	5	2	2	48	5	2	1	3	2	9	6	5	2	4	3	2	2
1	1	5	2	2	48	5	2	1	3	2	9	6	5	2	4	3	2	2
1	1	5	2	2	48	5	2	1	3	2	9	6	5	2	4	3	2	2
1				1	36	4	2	1	3		5	4	3		4		2	1
		5	2	1	12					2	2	1	1	2				
	1					1					2	1	1			3		1

Blacksmith's			Carpenter's Tools															
Monkey Wrenches	B.S. Shears	Swedges	Augers Ass't	Augers hol.	Adzes	Broad Axes	Hand Axes	Bench Axes	Braces	Bevels	Bits for Braces	Compasses	Framing Chisels (hand)	Framer Chisels	Morticing Chisels	Screw Drivers	Files Assorted	Rat Tail Files
No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
4	2	18	36	3	6	2	10	4	3	1	16	4	7	4	7	4	42	18
4	2	18	36	3	6	2	10	4	3	1	16	4	7	4	7	4	42	18
4	2	18	36	3	6	2	10	4	3	1	16	4	7	4	7	4	42	18
2	2	18	28	2	4	1	9	4	2	1	16	4	7	4	7	4	30	10
1																		
1			8	1	2	1	1		1								12	8

Carpenter's Tools

Flat Bastard Files	Rough Files	½ Round Files	Mill Saw Files	3 Square Files	Small Key Files	Hand Saw Files	Mortising Gauges	Gimblets	Marking Gauges	Shingling Hatchets	Hammers Asstd	Claw Hammers	Planes Match	" Mortising	" Joiner	" Jack	" Smoothing	" Sash
No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
8	6	20	36	15	4	29	2	15	1	7	15	2	3	1	5	5	1	0
8	6	20	36	15	4	29	2	15	1	7	15	2	3	1	5	5	1	0
8	6	20	36	15	4	29	2	15	1	7	15	2	3	1	5	5	1	0
6	6	12	36	6	4	18	2	10	1	5	12	2	3	1	2	5	1	0
				3														
2		8		6		11		5		2	3				3			

Carpenter's Tools

Planes Bead	Planes Plough	Planes Assid	Glue Pot & Kettle	Pencils	Square Framing	Square Panel	Square Trying	Squares Steel	Saws Rip	Saws Tenon	Saws Keyhole	Spoke Shave	Hand Saws	Stones Oil	Stones Grind	Punches	Saws Compass	Thumb Gauges
No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
1	1	10	1	19	2	2	6	3	6	3	1	6	4	5	4	7	3	4
1	1	10	1	19	2	2	6	3	6	3	1	6	4	5	4	7	3	4
1	1	5	1	19	2	2	6	3	6	3	1	6	3	3	3	7	3	4
		2											1	2	1			
		3																

Carpenter's Tools											Saddler's Tools						Miscellaneous Tools					
Chalk Lines	Rulers Carpenters	Bench Screw Wooden	Saw Frame Compass	Saw Set	Hammers Mason	Hammers Stone	Trowels Brick	Trowels Plaster	Awls & Handles	Wooden Horse	Needles	Punches	Saddlers Tools	Handles Asstd	Handles Felling Axes	Felling Axes	Padlocks	Steel Frocs				
No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No				
19	5	3	1	3	3	3	2	6	49	1	14	1	2	1	68	39	10	6				
19	5	3	1	3	3	3	2	6	49	1	14	1	2	1	68	39	10	6				
									49	1	14	1	2		1	1						
															1	1						
19	5	3	1	3	3	3	2	6						1	67	38	10	6				
19	5		1	3	3	3	2	6						1	24	20	8	6				
		3													43	18	2					

Miscellaneous Tools for Fatigue and Garrison Purposes

Crank & Rollers for Grind Stones	Tillers for Whip Saw	Whip Saws	Tape Measure	Spirit Levels	Pick Axes	Brushes N.N.	Crow Bars	Paint Brushes	Feed Cutter	Corn Cob Crusher	Forks Hay	Forks Stable	Hoes & Handles	Hatchets	Water Kegs	Knives Drawing	Lanterns	Mattocks
No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
1	5	7	1	1	3	15	3	4	1	1	12	9	6	6	1	13	1	4
1	5	7	1	1	3	15	3	4	1	1	12	9	6	6	1	13	1	4
1	5	6	1	1	3	8	1	4			5	3	6	6	1	10	1	2
		1				7	2		1	1	7	6				3		2

Miscellaneous Tools for Fatigue and Garrison Purposes

Palm Mill	Hydraulic Rams	Scythes	Grain Scoops	Shovels	Spades	Axe Slings	Hatchet Slings	Sheaths Scythes	Steel Yard	Corn Sheller	Whip Raw Hide	Curb for Chain Pump	Tubing for Chain Pump	Chain for Chain Pump	Handles Pick Ax	Tarpaulins	Scythe Stones	Curry Combs
No	No	No	No	No	No	No	No	No	No	No	No	No	Feet	Feet	No	No	No	No
1	1	1	3	17	6	4	2	21	1	1	1	1	81	36	6	5	10	1
																		1
1	1	1	3	17	6	4	2	21	1	1	1	1	81	36	6	5	10	1
1	1	1	3	17	6	4	2	21	1	1	1	1	81	36	6	5	10	1
1	1	1	3	10	5	4	2		1	1	1	1	81	36	3	4		1
				7	1			21							3	1	10	

(Cont.)

Stores for Expenditures, Iron, Steel, Horse Shoe, etc.

Horse Brushes	Buckles Brass	Buckles Roller	Buckles P. T. Harness	Borax	Beeswax	Buckskins	Brown Spanish	Chalk White	Chalk Red	Chrome Yellow	Charcoal	Glue	Iron	Lead White	Lead Black	Lead Red	Leather Bridles	Leather Harness
No	Gross	Gross	Gross	lbs	lbs	No	lbs	lbs	lbs	lbs	bus	lbs	lbs	lbs	lbs	lbs	Sides	lbs
	4	¾	1	5	5	0	7	10	2	5 ½		20	527	175	33	25	3 ½	100
											290							
1																		
1	4	¾	1	5	5	0	7	10	2	5 ½	290	20	527	175	33	25	3 ½	100
	½			1/8						3	190		56	175	1 ½		1 ½	52
	½			1/8						3	190		56	175	1 ½		1 ½	52
1	3 ½	¾	1	4 7/8	5	0	7	10	1	2 ½	100	20	471		31 ½	25	2	48
1	3 ½	¾	1	4 7/8	5	0	7	10	1	2 ½	100	20	471		31 ½	25	2	48

Stores for Expenditures, Iron, Steel, Horse Shoe, etc.

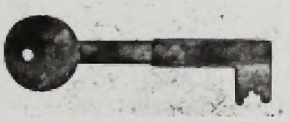
Litharge	Lamp Black	Nails Horse & Mule Shoe	Oil Linseed	Oil Neats Foot	Rope Lariat	Rope Picket	Rope	Rosin	Skins Sheep	Skins Calf	Screws	Silk Saddles	Shoes Mule	Shoes Horse	Steel Assid	Strings Hame	Sand Paper	Thread Saddlers
lbs	lbs	lbs	Gal	Gal	lbs	lbs	lbs	lbs	No	No	Gross	lbs	No	No	lbs	No	Gross	lbs
19 ½	4 ½	50	8	2	175	295	400	5 ½	4	1	12	¾	77	285	80	40	3	3 ½
										1 ¼								
19 ½	4 ½	50	8	2	175	295	400	5 ½	4	2 ¼	12	¾	77	285	80	40	3	3 ½
4	2	29	6		75			1		2 ¼	2 41/60	¼	44	16		6	¼	½
					100							½						3
4	2	29	6		175			1			2 41/60	¾	44	16		6	¼	1/2
15 ½	2 ½	21	2	2		295	400	4 ½	4		9 19/60		33	269	80	34	2 ¾	
15 ½	2 ½	21	2	2		295	400	4 ½	4		9 19/60		33	269	80	34	2 ¾	

Stores for Expenditures, Iron, Steel, Horse Shoe, etc.

Turpentine	Tin	Tacks	Timber Wagon Hind Hounds	Timber Wagon Front Hounds	Timber Wagon Hounds	Timber Wagon Coupling Poles	Timber Wagon Tongues	Webbing Bolts	Whiting	Jergor	Tar	Corn Sacks
Gal	Box	Papers	Pieces	Pieces	Pieces	Pieces	Pieces	No	lbs	varas	Gal	No
4 ½	¾	26	10	27	15	8	8	1	8			
											35	704
										756		
									9			
4 ½	¾	26	10	27	15	8	8	1	17	756	35	704
4 ½		7					2		17			
4 ½		7					2		17			
	¾	19	10	27	15	8	6	1		756	35	704
	¾	19	10	27	15	8	6	1		756	35	704

Appendix 4

1860, 1870, & 1880 CENSUSES FOR FORT CRAIG



1860 Census, Fort Craig Precinct

Name	Age	Occupation	Place of Birth
Rafael Silva	87		New Mexico
Tomasa Valencia	23	Laundress	New Mexico
Juan Diebo	4		New Mexico
Emilia	1		New Mexico
Anna Maria Miranda	3		New Mexico
Jose Leon Gallegos	16	Laborer	New Mexico
Jacob Shengers [?]	34	Soldier	Bavaria
Charlotte	30		
William	5		Texas
James	2		New Mexico
Joseph Sherling	34	Soldier	Warsaw
Elizabeth	23		Prussia
Adolph (f)	2		New Mexico
Estefano Gamora	40	Servant	New Mexico
Solidas	34		New Mexico
Gregoria	15		New Mexico
Juan Tomasino	2		New Mexico
Alphonso Jaramillo	65	Laborer	New Mexico
Manuela	40		New Mexico
Jose Raphael	19	Laborer	New Mexico
Francisco Romero	25	Laborer	New Mexico
Lucia	17		New Mexico
Jose	2		New Mexico
Maria Pena	18	Seamstress	New Mexico
Clara	4		New Mexico

Name	Age	Occupation	Place of Birth
Guadelupe Miranda	20	Laborer	New Mexico
Trinidas	14		New Mexico
Estefana Abieta	43		New Mexico
Jose Domingo	18	Laborer	New Mexico
Joaquin	12		New Mexico
Josefa	7		New Mexico
Gregoria	17	Servant	Sonora
Trinidas	7/12		New Mexico
Dolores Luna	43	Washwoman	New Mexico
Refugia	17		New Mexico
Maria Eugenia	4		New Mexico
Jose Villasquez	20	Merchant	Sonora
Luciano Morales	34	Servant	New Mexico
J. Zpamosvsky [?]	45	Merchant/Peddler	Poland
J. Raynolds	35	Clerk	Ireland
Jose Gonzales	24	Servant	New Mexico
Edward Treacy	32	Officer W.L.W.	Ireland
Robert M. Webb	22	Soldier	New Jersey
Henry Shenk	21	Soldier	Warsaw
William McLane	32	Soldier	Ireland
Jacob Wisner [?]	28	Soldier	France
John Brown	34	Soldier	Ireland
Miguel Convoy	22	Soldier	Rhode Island
Timothy Dowing	22	Soldier	Ireland
James Ellison	27	Soldier	Virginia
Charles Phillips	22	Soldier	Ireland
William H. King	20	Soldier	Maryland
John W. Bragan	26	Soldier	New Jersey
James Bruce	32	Soldier	Scotland
Milton Copper	23	Soldier	New York
Charles Forresser [?]	21	Soldier	Pennsylvania
Patrick Twinberg	21	Soldier	Ireland
Miguel Barres	23	Soldier	Ireland
John Rorsh	20	Soldier	Germany
W.L. Price	21	Herder	New York
Josef Dieba	30	Herder	Canada
Miguel Duran	40	Herder	New Mexico
Francis Chamberly	25	Soldier	Massachusetts
Mary	21		New Mexico
Martha	23		New Mexico
Leonora	8/12		New Mexico
John Ferris	35	Soldier	Ireland
Ellen	30		Ireland
Tomas	3		Texas
Mary	2		New Mexico
Ellen	8/12		New Mexico
Dew. Janston [?]	30	Soldier	Illinois
Mary	30		Ireland
Francis	6		Ireland

Name	Age	Occupation	Place of Birth
James Rayan	23	Soldier	Ireland
Bridget	22		Ireland
Bridget Michel	25	Laundress	Ireland
Ana	2/12		New Mexico
Margaret —ing	30	Laundress	Ireland
Thomas White	3		New Mexico
Henry Sommers	36	Soldier	Ireland
Mary	28		Ireland
Mary	5		Louisiana
Margareth	3		New Mexico
Henry	2		New Mexico
Elisabeth	2/12		New Mexico
Tomasa Gonzales	19	Laundress	New Mexico
Abram	5		New Mexico
Celia	4		New Mexico
Amado	4/12		New Mexico
Maria Gonzales	26	Laundress	New Mexico
Margarita	2		New Mexico
Nestar	11		New Mexico
Mary Strech	38	Laundress	Ireland
Susana	7		Texas
Katarina	4		Texas
John	2		New Mexico
Mary Ann	7/12		New Mexico
James Robertson	41	Soldier	Arkansas
Elisabeth	36		New York
George	4		Texas
Christobal Archuleta	40	Servant	New Mexico
Lorenza	37		New Mexico
Juan Jose	8		New Mexico

1870 Census, Contadero Precinct

Name	Age	Occupation	Place of Birth
F.W. Eaton	30	Soldier	Massachusetts
N.C. Ekhart	28	Soldier	Wertenburg
J. Glovey	28	Soldier	Ireland
D.D. Chandler	28	Soldier	Missouri
Peter Basgony	29	Soldier	France
A. Bussnam [sp]	24	Soldier	Prussia
F.A. Beuhard	40	Soldier	Switzerland
D. Desilas [sp]	28	Soldier	Spain
K.C. Madison	25	Soldier	Virginia
Thomas Murphy	24	Soldier	New York
John Mitchel	28	Soldier	Ireland
John Snyder	28	Soldier	Prussia
J. Shultz	23	Soldier	Prussia
Jasper Smith	34	Soldier	Germany
Olicio St. Leon	36	Soldier	Spain
J. Thurman	36	Soldier	Baden, Germany
Theodore Welder	36	Soldier	Prussia
Herbert Bragg	35	Soldier	Virginia
Francis Rourke	45	Soldier	Ireland
James Trainer	22	Soldier	New York
James Borr	30	Soldier	Pennsylvania
Michael Mayer	25	Soldier	Germany
Charles Goodwin	25	Soldier	New York
Henry Convesy	31	Soldier	Ireland
John Galloway	30	Soldier	Pennsylvania
J.W. Miller	26	Soldier	Maine
A. McKenne	26	Soldier	Canada
Henry Plaggi	29	Soldier	Brunswick
Fred Ward	26	Soldier	England
W.L. Daniels	27	Soldier	Connecticut
W.K. Truman	24	Soldier	New York
G.S. Woods	27	Soldier	Ireland
Kernson Wesch	24	Soldier	Hamburg
Christ Hand	24	Soldier	Ireland
William Rossler	38	Soldier	Baden, Germany
Thomas Ryan	28	Soldier	Ireland
N.C. Collins	30	Soldier	Ireland
George Mayhead	25	Soldier	Pennsylvania
James Euell	26	Soldier	Scotland
M. McDonald	30	Soldier	Ireland
William Shroeder	24	Soldier	Prussia
John Behm	29	Soldier	Prussia
David Holl	24	Soldier	England
O.B. Bower	28	Soldier	England
S.W. Jennings	21	Soldier	Indiana
J.M. Monk	38	Soldier	Germany
J.C. McGinnes	24	Soldier	New Jersey
James Sery [sp]	25	Soldier	Germany
J.A. Scotts	24	Soldier	Illinois
M. Burns	23	Soldier	Louisiana
Dennis Brown	23	Soldier	Ireland
Patrick Leonard	23	Soldier	Pennsylvania
Simon Maxx	22	Soldier	Prussia
V. Vaghmann	30	Soldier	Switzerland
P.G. Neff	29	Soldier	Germany
A. Lawrence	36	Soldier	Ireland

Name	Age	Occupation	Place of Birth
Fred Slater	37	Soldier	England
John Lattimer	29	Soldier	Nova Scotia
Richard Weller	36	Soldier	Ireland
Patrick Allen	27	Soldier	Pennsylvania
Thompson Miller	29	Soldier	Kentucky
Conrad Whitesal	44	Soldier	New York
Dewit Whitney	25	Soldier	Germany
Henry Steiner	27	Soldier	Ireland
John Kurn	25	Soldier	Ireland
Joseph Thacker	31	Soldier	Germany
William Soughel [?]	34	Soldier	Indiana
J.M. Page	42	Soldier	New York
Thomas Kane	26	Soldier	New York
Frank Russel	29	Soldier	France
John Coon	24	Soldier	Alabama
P. Kalligan	28	Soldier	Ireland
Henry Sefler	33	Soldier	Switzerland
Louis Parri	26	Soldier	Ireland
J.M. Covuchai	23	Soldier	Georgia
Antonio Gerien	24	Soldier	Germany
J.A. Evans	28	Soldier	Kentucky
T. Connelly	22	Soldier	Ireland
William McMarty	30	Soldier	New York
William Crosby	24	Soldier	Maryland
Julius Switzer	21	Soldier	Ohio
W.W. Province	21	Soldier	Tennessee
Charles Clark	22	Soldier	New York
James Darle	23	Soldier	Pennsylvania
R.H. Eddington	26	Soldier	England
M. Thacker	38	Laundress	Ireland
Kate	14		Texas
Mary	12		Texas
M. Murphy	17	Laundress	New York
C.W. Allen	25	Soldier	Pennsylvania
Charles Anderson	21	Soldier	Germany
E. Armstrong	36	Soldier	England
W. Becker	23	Soldier	England
Fred Breatler	22	Soldier	Prussia
Charles Brown	22	Soldier	New York
J.G. Bernord	23	Soldier	Ireland
C.W. Burns	22	Soldier	Pennsylvania
J.L. Borr	40	Soldier	Pennsylvania
L.G. Connelly	22	Soldier	Ireland
Patrick Corcoran	29	Soldier	Ireland
Martin Dean	22	Soldier	Ohio
Edward Dunn	38	Soldier	Ireland
J.W. Davis	23	Soldier	Maine
M.J. Foster	28	Soldier	Illinois
M.J. Frederick	26	Soldier	Pennsylvania
J. Gordon	26	Soldier	Ireland
W.H. Grove	29	Soldier	Pennsylvania
Irvin Heath	21	Soldier	Vermont
William Hasper	26	Soldier	Prussia
Jacob Hebert	21	Soldier	Germany

Name	Age	Occupation	Place of Birth
John Heep	27	Soldier	Germany
John Hays	29	Soldier	Germany
John O'Neil	25	Soldier	Ireland
Simon Quinn	22	Soldier	Pennsylvania
M. Rodrigues	47	Soldier	Mexico
William Ryan	43	Soldier	Ireland
D. Rosenbaum	23	Soldier	Germany
Valentine Storres	32	Soldier	Germany
George Scott	24	Soldier	Scotland
John Short	21	Soldier	New York
J. Smith	21	Soldier	Pennsylvania
George Seymour	26	Soldier	Pennsylvania
Henry Thomas	22	Soldier	Pennsylvania
Henry Mirch	23	Soldier	Germany
O.W. Warren	22	Soldier	Pennsylvania
Christian Webber	36	Soldier	Germany
Henry Wempe	21	Soldier	Germany
James Young	22	Soldier	New York
Jenny Woods	23 (B)	Laundress	Kentucky
Charles Bowman	36	Hospital Steward	England
Elizabeth	30	Hospital Matron	Ireland
Mary	6		New Mexico
Edward	4		New Mexico
Anna	2		New Mexico
Minnie Eaton	23	Laundress	Texas
Frank	1		Texas
Anne Glancy	24	Laundress	Ireland
Maria Rourke	35	Laundress	Ireland
William Shephard	12		New Mexico
Celia Shephard	10		New Mexico
Mary Shephard	8		New Mexico
Frank Rourke	5		New Mexico
Kate Rourke	3		New Mexico
W.V.B. Wardwell	32	Sutler U.S.A.	Massachusetts
Mary A.	25	Keeping House	Indiana
Charles A.	5		New Mexico
William W.	3		New Mexico
Fanny B.	1		New Mexico
George Seowell [?]	32	Book Keeper	New York
Eugene Cosgrove	25	Clerk in Store	Missouri
Edmond Holland	40 (B)	Domestic Servant	Kentucky
Miguel Buiro [?]	34	Domestic Servant	New Mexico
Pablita	16	Domestic Servant	New Mexico
Maria	18	Domestic Servant	New Mexico
Joseph Silski	28	Clerk in Store	Poland
D.F. Horshaw	40	Freighter	New York
H.G. Federman	35	Surgeon U.S.A.	Prussia
John Green	25 (B)	Servant	Georgia

Name	Age	Occupation	Place of Birth
F.W. Coleman	34	Officer U.S.A.	New York
Pendleton Hunter	23	Officer U.S.A.	Virginia
W.J. Gartel	25	Officer U.S.A.	Vermont
Sophia C.	24	Keeping House	Vermont
John P.	9/12		New Mexico
Betty I——	30 (B)	Domestic Servant	Texas
Ferdinand	7 (B)		Texas
Eutro Werner	47	Hotel Keeper	Germany**
Charles Beeswenger	31	Hotel Keeper	Germany**
Jose Debous	42	Laborer	France**
Willam Alers	40	Laborer	England**
Sophia	18	Keeping House	New Mexico
William	2/12		New Mexico
Anne Hetzer	40		Ireland
Maria Sanches	18	Washwoman	New Mexico
John Spurr	61	Butcher	Maine**
John Knowles	25	News Agent	Massachusetts
Anna Maria Martin	28	Keeping House	New Mexico
Jose	12		New Mexico
Juakin [sic]	11		New Mexico
David	6		New Mexico
Andrea	4		New Mexico
Juanito Sanchez	21	Herder	New Mexico
F.H. Creamer	21	Clerk QM Office	New York
Benito Montallo	24	Laborer	New Mexico**
R.E. Bradford	30	Officer U.S.A.	Ohio
F.B.	20	Keeping House	Ohio
F.W.	2		Alabama
Formasa Crux	25		Mexico**
Rito	10		New Mexico
John O'Brien	24	Laborer	Ireland**
Victoria	15	Keeping House	New Mexico
Frank Arnet	35	Ferryman	Pennsylvania**
Turvivia	24	Keeping House	New Mexico
Antonio	5		New Mexico
Maria	3		New Mexico

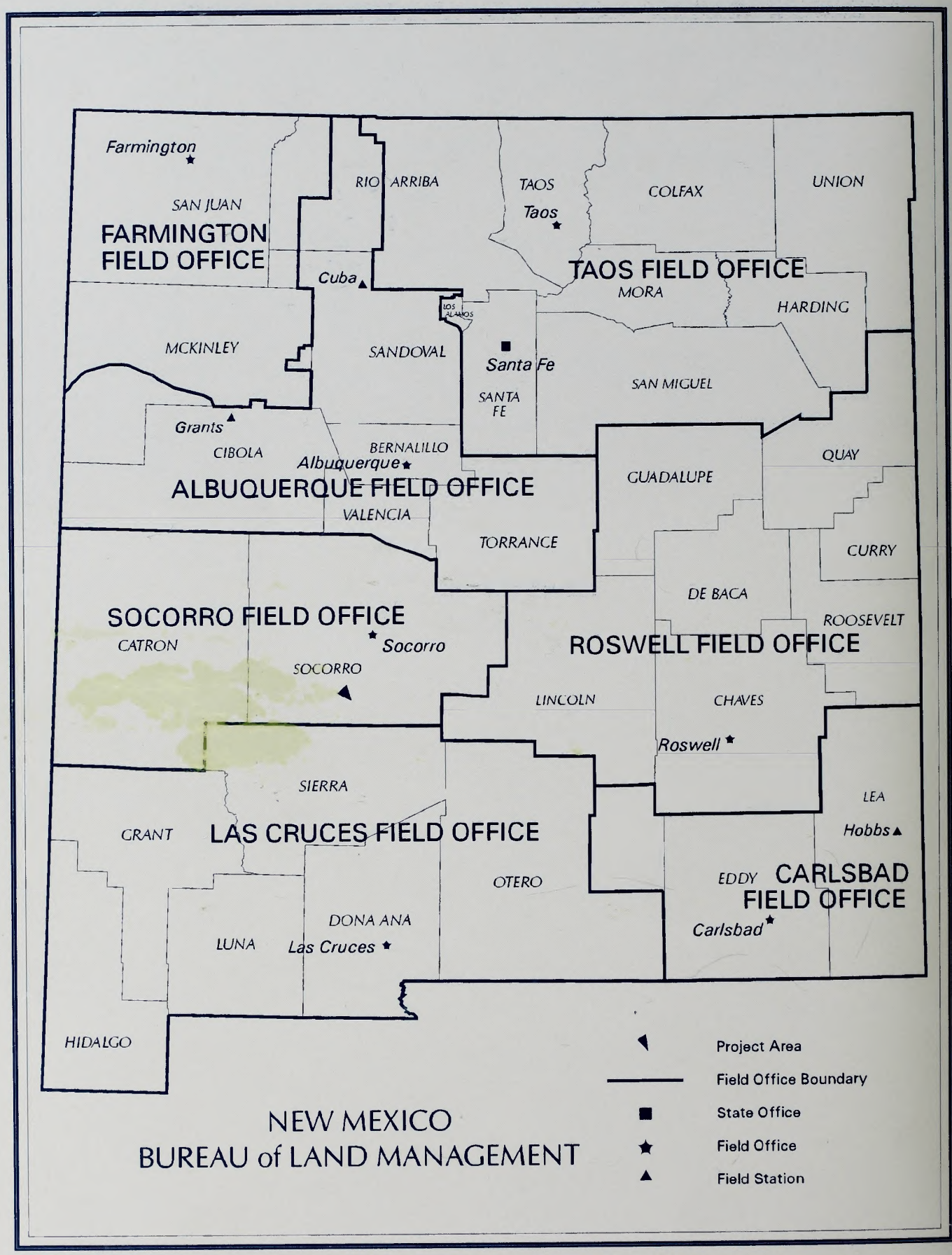
** Household may be outside the Fort

1880 Census, Fort Craig Precinct

Name	Age	Occupation	Place of Birth
William J. Worden [?]	40	Hotel Keeper	Canada
Lissie	36	Keeping House	Connecticut
Helen	3		New Mexico
Alexander Rhodes	26	Laborer	Alabama
Edward Fest	31	Stockraiser	Ohio
Mary	21	Keeping House	New Mexico
Cassius	4		New Mexico
Nennia R.	2		New Mexico
Bruno Abieta	40	Laborer	New Mexico
W. McChesney	28	U.S. Signal Service	Kentucky
Franklin Hill	28	U.S. Army	Missouri
Francis Co——	38	Stockraiser	New York
Robert Robinson	40	Laborer	Illinois
W.A. Thurston	22	Lieutenant. U.S.A.	Alabama
Edward Hatch	48	Brev. Maj. General U.S.A.	Wisconsin
G. Vallois	39	1st Lieutenant	Prussia
Theodore Duv—ast	30	1st Lieutenant	Washington, D.C.
A.W. Budd	38	1st Lieutenant	Pennsylvania
Frank Kingman	31	Clerk U.S.A.	New York
E. McDonald	23	2nd Lieutenant	Tennessee
Charles Goeltingen	45	Clerk U.S.A.	Baden, Germany
William White	30	Soldier	Prussia
Joseph Ward	29	Soldier	Missouri
George Wilson	31	Soldier	Illinois
Samuel Saville	22	Soldier	Massachusetts
David Stevens	29	Soldier	Ireland
George H. Roberts	21	Soldier	Massachusetts
John Murphy	34	Soldier	Ireland
Daniel Marley	24	Soldier	New Jersey
John Alexander	28	Soldier	Pennsylvania
Francis Casey	29	Soldier	Florida
Volastin Murbach	35	Soldier	Switzerland
William Hall	26	Soldier	England
Daniel Sullivan	22	Soldier	Ireland
Silas J. Morehouse	25	Soldier	Ohio
Hugo Miller	24	Soldier	Saxony
Louis E. Mark	21	Soldier	Illinois
Horatio L. Lackey	23	Soldier	Virginia
Peter [?]	23	Soldier	Indiana
John Kelly	24	Soldier	New York
O. Huntsinger	26	Soldier	Indiana
Thomas Curran	22	Soldier	Massachusetts
Charles Bingamen	21	Soldier	Ohio
Charles Adams	32	Soldier	New York
James E. Happle	34	Soldier	Ohio
Theodore M. Warren	21	Soldier	New York
Joseph Walker	29	Soldier	Washington, D.C.
Frederick Scott	22	Soldier	New York
Frederick Knapp	22	Soldier	Maryland
Alexander Green	25	Soldier	Sweden
Charles Gardiner	28	Soldier	Kentucky
Frederick Arnold	29	Soldier	England
John J. Madden	26	Soldier	Pennsylvania
James E. Fulton [?]	39	Soldier	Maryland

Name	Age	Occupation	Place of Birth
John Stratten	26	Soldier	Pennsylvania
William McGuire	29	Soldier	Georgia
Henry Irving	21	Soldier	Germany
James Whirtham	21	Soldier	Indiana
James P. Taylor	30	Soldier	Maryland
Albert Schwartz	25	Soldier	Pennsylvania
David McGerat [?]	30	Soldier	Indiana
Michael Holmes	22	Soldier	Pennsylvania
Conrad Grau	21	Soldier	Pennsylvania
Octave Brachen	24	Soldier	Canada
Samuel A. Trask	27	Soldier	Missouri
John Lusy [?]	38	Soldier	Ireland
Charles H. Hamilton	42	Soldier	Ohio
James J. Bowland	42	Soldier	Tennessee
James E. Maginnis	21	Soldier	New York
Paul King	22	Soldier	Massachusetts
Joseph N. Hill	22	Soldier	Pennsylvania
James Elliot	21	Soldier	Nova Scotia
Wolsey H. Sloan	21	Soldier	Ohio
John Sullivan	31	Soldier	Michigan
Patrick Shannon	26	Soldier	Ireland
Hugh Reed	21	Soldier	Pennsylvania
McClellin Rankin	21	Soldier	New York
Douglas N. Meek	22	Soldier	Illinois
Daniel McIntosh	28	Soldier	Scotland
Dennis J. Kane	21	Soldier	Pennsylvania
Charles Neyde	24	Soldier	Pennsylvania
George Drinkham	21	Soldier	New York
Richard Cunningham	28	Soldier	Ohio
William N. Buckley	31	Soldier	Ireland
Philip Reed	23	Soldier	New York
Benjamin F. Adams	35	Soldier	Virginia
Henry C. Ladd	19	Soldier	England
Charles Sherman	30	Soldier	New York
Charles D. Bowker	24	Soldier	Maine
Edward S. Fisher	29	Soldier	England
William Lentz	32	Soldier	Germany
John Sommers	22	Soldier	Germany
Joseph Neas [?]	29	Soldier	Massachusetts
John Muldowney	21	Soldier	Ireland
Henry W. Gilmore	21	Soldier	Germany
Otto Coopher	22	Soldier	Germany
Timothy Gaffern	25	Soldier	Ireland
Thomas M. Brown	30	Soldier	Pennsylvania
William Stoner	30	Soldier	Pennsylvania
Charles Kelley	26	Soldier	Virginia
John O'Brien	28	Soldier	Ireland
William F. Dobbin	28	Soldier	Canada
Thomas Conway	32	Soldier	Ohio
Charles F. –on-ght	32	Soldier	Pennsylvania
John W. Bracker	24	Soldier	Maryland
Edward Whalen	28	Soldier	Ireland
David Morgan	29	Soldier	Wales
Thomas R. Gatewood	29	Soldier	Virginia
Issac M. Vouschinltz [?]	21	Soldier	Ohio
John D. Hart	22	Soldier	New York
James Casey	21	Soldier	New York

Name	Age	Occupation	Place of Birth
John Curran	26	Soldier	Massachusetts
Patrick O'Niel	22	Soldier	Ireland
Issac M. Danubruin [?]	21	Soldier	Ohio
David Callehan	21	Soldier	New York
Julius R. Walker	21	Soldier	Illinois
Alvin Neroton	23	Soldier	Connecticut
Patrick Linskey	24	Soldier	Ireland
John Henkett	21	Soldier	Ohio
Frederick Haag	22	Soldier	Pennsylvania
Henry Grady	21	Soldier	Connecticut
Archibald Given	23	Soldier	Delaware
Louis B. French	22	Soldier	Connecticut
Charles J. Dutchet	25	Soldier	New York
Frank Blaser	30	Soldier	Germany
Alfred L. Boath	21	Soldier	Connecticut
John Alerns	29	Soldier	Ireland
Owen O'Niel	34	Soldier	Ireland
George Weiler	26	Soldier	Germany
Mooritz Schmid	21	Soldier	Germany
Roy Rivers	27	Soldier	Ohio
Patrick O'Keefe	23	Soldier	England
Patrick Kehoe	28	Soldier	Ireland
William F. Kuschke	22	Soldier	Pennsylvania
William J. Gardner		Soldier	New York
George Cummins	23	Soldier	Scotland
Charles Bradley	21	Soldier	New York
Henry A. Kitcher [?]	26	Soldier	New Brunswick
Ander J. Loy	23	Soldier	New York


Farmington
SAN JUAN
FARMINGTON FIELD OFFICE
RIO ARRIBA
TAOS
Taos
COLFAX
UNION
TAOS FIELD OFFICE
Cuba
MORA
HARDING
LOS ALAMOS
MCKINLEY
SANDOVAL
Santa Fe
SAN MIGUEL
SANTA FE
Grants
CIBOLA
BERNALILLO
Albuquerque
QUAY
ALBUQUERQUE FIELD OFFICE
GUADALUPE
VALENCIA
TORRANCE
CURRY
DE BACA
SOCORRO FIELD OFFICE
ROOSEVELT
CATRON
Socorro
ROSWELL FIELD OFFICE
SOCORRO
LINCOLN
CHAVES
Roswell
SIERRA
LEA
GRANT
LAS CRUCES FIELD OFFICE
Hobbs
OTERO
EDDY
CARLSBAD FIELD OFFICE
DONA ANA
Carlsbad
LUNA
Las Cruces
HIDALGO
Project Area
Field Office Boundary
State Office
Field Office
Field Station
NEW MEXICO
BUREAU of LAND MANAGEMENT